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PERSONAL.

Mr. Karl L. Lehman, civil engineer and architect, of Chicago, Ill., has removed his office from 1741 Monadnock Block to the Dexter Building.

Capt. James W. Millen, Water Commissioner of Detroit, Mich., has been nominated by Mayor Maybury as Commissioner of Public Works of that city.

Mr. M. Ward Easby, M. Am. Soc. C. E., consulting engineer, of Philadelphia, Pa., will remove his office Feb. 1, to 900 Crozer Bldg., 1420 Chestnut St.

Mr. L. L. Buck, M. Am. Soc. C. E., has been reappointed Chief Engineer of the new East River bridge by the new Commission recently put in charge of the work on that structure.

Mr. Geo. H. Pegram, M. Am. Soc. C. E., of Omaha, has resigned as Chief Engineer of the Union Pacific Ry., to accept the position of Consulting Engineer to the Manhattan Elevated Ry. Co., of New York City.

Mr. Foster Crowell, M. Am. Soc. C. E., of New York city, will deliver a lecture on "Engineering Features of the Nicaragua Canal Problem," Feb. 16, before the Engineering Society of Columbia University.

Mr. Charles C. Martin, M. Am. Soc. C. E., Chief Engineer and Superintendent of the New York and Brooklyn Bridge, has been appointed Chief Engineer of all the bridges in the Borough of Brooklyn, New York city.

Mr. W. E. Morse has been appointed Superintendent of the Galena Division of the Chicago & Northwestern Ry., with headquarters at Chicago, Ill., to succeed Mr. J. C. Stuart, who has resigned to accept an appointment with another road.

Mr. Henry W. Battin, Division Engineer of the Chicago & Northwestern Ry., with headquarters at Baraboo, Wis., has been appointed Assistant Superintendent of the Madison Division, to succeed Mr. W. E. Morse, promoted, with office at the same place.

Mr. A. G. Menocal, C. E., U. S. N., will be tried by court martial, beginning March 7, at the New York Navy Yard. The charge is culpable inefficiency in the performance of duty, in the construction of dry dock No. 3, at the New York Navy Yard, while he was in charge of that work.

Mr. Sidney Francis Lewis, M. Am. Soc. C. E., Assistant State Engineer of Louisiana, has been elected President of the recently organized Louisiana Engineering Society, of New Orleans. He is a graduate of the University of Virginia in the class of 1870 and as a civil engineer in 1874.

Mr. A. B. Coe, who for the past 14 years has been connected with the City Engineer's Department of Minneapolis, Minn., has accepted a position in the Bridge Department of the Northern Pacific Ry., with headquarters at Tacoma, Wash. He has been Bridge Engineer of Minneapolis for the past six years.

Mr. Hibbert Hill, M. B., Biologist and Director of the Rockville Centre Laboratory for Sanitary Supervision of the water shed of the Borough of Brooklyn, N. Y., has resigned, owing to the abolition of the laboratory by order of the new administration. Mr. J. W. Ellms, formerly chemist to the laboratory, has accepted the position of first assistant to Mr. Geo. W. Fuller, in the experimental work on filtration now being conducted in Cincinnati, O.

OBITUARY.

Mr. W. F. Stoddard, civil engineer, of Ilion, N. Y., died Jan. 19, aged 78.

Mr. Jas. F. Smith, formerly Chief Engineer of the Schuylkill Navigation Co., died at Reading, Jan. 31, at the age of 84.

Mr. William P. Abendroth, founder of the Eagle Iron Foundry, Port Chester, N. Y., died at Rye, N. Y., Jan. 29, aged 79.

Mr. John W. Lineax, Assistant Train Master of the Amboy Division of the Pennsylvania R. R., died at Camden, N. J., Jan. 26, aged 51.

Mr. William M. Cook, civil engineer, of Brewsters, N. Y., died of appendicitis, Jan. 24, at Brockport, N. Y. He was a member of the engineer corps of the New York State canals.

Lord Sackville Arthur Cecil, who from 1878 to 1880 was General Manager of the Great Eastern Ry. of England, and 1880 to 1885, General Manager of the Metropolitan District Ry., of London, died of pneumonia, Jan. 29, aged 50.

Capt. Matt. O'Brien, United States Supervising Inspector of Steam Vessels, at New Orleans, La., died last week. He served in the Confederate Army during the Civil War, and was the engineer of the "Alabama" at the time it was destroyed.

Mr. George D. Hilyard, contractor and builder, of New York city, died Jan. 28, aged 68. He was a life member of the Metropolitan Museum of Art, the American Museum of Natural History, the Botanical Garden Association and the Zoological Garden Association, all of that city.

Mr. Oliver Blackburn Shallenberger, a well-known electrician, died at Colorado Springs, Colo., Jan. 24, aged 37. He graduated from the U. S. Naval Academy, Annapolis, Md., but in 1884 resigned from the navy and entered upon electrical work in Pittsburg, Pa. Since 1891 he has been a consulting engineer to the Westinghouse Electric & Mfg. Co., Pittsburg, and is said to have been with Mr. George Westinghouse, the first to demonstrate, in this country, the efficiency and safety of the alternating current.

ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

TECHNICAL SOCIETY OF THE PACIFIC COAST.
Feb. 4. Secy., O. Von Geldern, 819 Market St., San Francisco, Cal.

CHICAGO ELECTRICAL ASSOCIATION.
Feb. 4. "Electricity in Shipbuilding," C. C. Mattison; Secy., J. R. Cravath, 825 Monadnock Block, Chicago, Ill.

THE ENGINEERS' CLUB OF PHILADELPHIA.
Feb. 5. "Various Phases of Road Question," Gen. Roy Stone. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.

CIVIL ENGINEERS' SOCIETY OF ST. PAUL.
Feb. 7. Secy., C. L. Annan, City Engineers' Office, St. Paul, Minn.

ENGINEERS' SOCIETY OF WESTERN NEW YORK.
Feb. 7. Secy., H. J. March, Library Bldg., Buffalo, N. Y.

DENVER SOCIETY OF CIVIL ENGINEERS.
Feb. 8. Secy., W. B. Lawson, 36 Jacobson Bldg., Denver, Col.

CIVIL ENGINEERS' CLUB OF CLEVELAND.
Feb. 8. Secy., Wm. H. Searles, Case Library Bldg., Cleveland O.

NORTHWEST RAILWAY CLUB.
Feb. 8. Secy., T. A. Fogue, Soo Line, Minneapolis, Minn.

WISCONSIN POLYTECHNIC SOCIETY.
Feb. 8. Secy., W. K. Means, Loan & Trust Bldg., Milwaukee, Wis.

NEW ENGLAND RAILROAD CLUB.
Feb. 9. Secy., Edward L. Jones, P. O. Box 1158, Boston, Mass.

FRANKLIN INSTITUTE.
Feb. 9. "The Practical Aspect of Present Methods of Testing Iron and Steel," Paul Kreuzpointner. Feb. 24. "The Telephone Exchange," Herbert L. Webb. Secy., Wm. H. Wahl, 15 S. Seventh St., Philadelphia, Pa.

ENGINEERING ASSOCIATION OF THE SOUTH.
Feb. 10. Secy., C. B. Wilson, Nashville, Tenn.

ST. LOUIS RAILWAY CLUB.
Feb. 11. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.

MONTANA SOCIETY OF ENGINEERS.
Feb. 12. Secy., Albert S. Hovey, Helena, Mont.

INDIANAPOLIS ENGINEERING CLUB.
Feb. 12. Secy., Edson F. Folsom, Indianapolis, Ind.

ENGINEERS' CLUB OF KANSAS CITY.
Feb. 14. Secy., F. W. Tuttle, Baird Bldg., Kansas City, Mo.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.
Feb. 15. Secy., R. A. Fessenden, 410 Penn Ave., Pittsburg, Pa.

WESTERN RAILWAY CLUB.
Feb. 15. Secy., F. M. Whyte, 225 Dearborn St., Chicago, Ill.

AMERICAN INSTITUTE OF MINING ENGINEERS.
Feb. 15. Annual meeting Atlantic City, N. J. Secy., R. W. Raymond, 13 Burling Slip, New York city.

THE PACIFC COAST TRANSMISSION ASSOCIATION.
Feb. 15-18. Secy., Robt. McF. Doble, Blue Lake Water Co., Blue Lake, Humbolt Co., Cal.

BOSTON SOCIETY OF CIVIL ENGINEERS.
Feb. 16. Secy., S. E. Tinkham. City Hall, Boston, Mass.

WESTERN FOUNDRYMEN'S ASSOCIATION.
Feb. 16. Secy., A. Sorge, Jr., 1020 Monadnock Block, Chicago, Ill.

ENGINEERS' AND ARCHITECTS' ASSOCIATION OF SOUTHERN CALIFORNIA.
Feb. 16. Secy., Frank H. Olmsted, Los Angeles, Cal.

ENGINEERS' CLUB OF ST. LOUIS.
Feb. 16. Secy., Richard McCulloch, St. Louis, Mo.

AMERICAN SOCIETY OF CIVIL ENGINEERS.
Feb. 16. Secy., C. W. Hunt, 220 West 57th St., New York city.

CANADIAN SOCIETY OF CIVIL ENGINEERS.
Feb. 17. Secy., C. H. McLeod, 112 Mansfield St., Montreal, Canada.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.
Feb. 17. Secy., F. A. Charlot, Macon, Ga.

ENGINEERS' CLUB OF CINCINNATI.
Feb. 17. Secy., J. F. Wilson, P. O. Box 333, Cincinnati, O.

NEW YORK RAILROAD CLUB.
Feb. 17. Secy., W. W. Wheatly, 168 Montague St., Brooklyn, N. Y.

ENGINEERS' CLUB OF COLUMBUS.
Feb. 19. Secy., M. S. Hopkins, 14½ N. High St., Columbus, O.

TECHNICAL CLUB OF OMAHA.
Feb. 21. Secy., J. Harry Lawrie, Omaha, Neb.

ENGINEERS' CLUB OF MINNEAPOLIS.
Feb. 21. Secy., Elbert Nexsen, 1620 S. E. 4th St., Minneapolis, Minn.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.
Feb. 23. Secy., R. W. Pope, 26 Cortlandt St., New York city.

NEBRASKA BRICK MANUFACTURERS' ASSOCIATION.—The annual meeting of this association was held in Omaha, Neb., Jan. 25. The following officers were elected for 1898: President, J. Fred. Smith; First Vice-President, John Edelmair; Second Vice-President, W. H. Morrison; Secy., W. H. Bushell; Treas., J. E. Stockwell.

THE ENGINEERS' CLUB.—The annual meeting of the Engineers' Club of New York city was held Jan. 18. The following officers were elected to serve during 1898: Pres., John Thomson; Vice-Presidents, John C. Kafer and A. G. Mills; Secy., O. F. Nichols; Treas., A. C. Rand; Board of Trustees, Geo. W. Bramwell, Chas. S. Henry, W. A. Redding and J. R. Stanton.

HENRY ELECTRICAL SOCIETY.—This society held a meeting Jan. 21 in the engineering building of Columbia University, New York city. Mr. D. R. Lovejoy read a paper entitled "The Induction Coil and High Potential Discharges." This was a general treatment of the subject, and included the early history, construction and exhibition of recent advances. Several actual coils were shown and experiments were performed with Crookes and Geissler tubes.

THE CHICAGO ELECTRICAL ASSOCIATION.—The following is the program for the spring meetings of this association: Feb. 4, "Electricity in Shipbuilding," C. C. Mattison; Feb. 18, "Electricity in Medicine," E. W. Jewell; Mar. 4, "The Relationship of the Hunter and Tesla Patents," A. Miller Belfield; Mar. 18, "The Autobiography of a Piece of Wire," C. T. Gage; Apr. 15, "The Electric Railway," W. R. Garton; May 6, "The Enclosed Arc Lamp," J. M. Hollister. On May 20 the annual banquet will be held.

BOSTON SOCIETY OF CIVIL ENGINEERS.—At a meeting of this society, held Jan. 26, Mr. F. H. Newell, of the United States Geological Survey, presented a paper in which he outlined the recent progress in hydrographic investigations by the United States Geological Survey. This was a discussion of the question of location and use of water powers and the reasons why the development of such powers has been retarded in the Eastern States. The importance of measuring the capacity of streams and of knowing the character of their tributaries and whether polluted or not, was also mentioned.

ENGINEERS' CLUB OF PHILADELPHIA.—At a special meeting held Jan. 28, with 106 members and visitors present, Mr. Eben A. Scott presented a paper on "The Keely Motor," in which he expressed his opinion of the apparatus operated by Mr. Keely, basing his opinions on information obtained during four visits to Mr. Keely's laboratory in the interests of one of the largest stockholders in the Keely Motor Co. Mr. Scott claimed that Keely had not discovered a new principle, and that several of his experiments could be duplicated by very simple means. A discussion followed the reading of the paper, and was participated in by Messrs. H. W. Spangler, Edgar Marburg, Carl Hering, F. Schumann, and other members; and by Messrs. Charles B. Collier, counsel for the Keely Motor Company, Lancaster Thomas, one of its stockholders, and Barnet Le Van, who spoke in support of the claims of Mr. Keely.

NEW JERSEY STATE ROAD IMPROVEMENT ASSOCIATION.—The annual meeting of this association was held Jan. 19 in Trenton, N. J. Several matters of importance in connection with road extension and improvement came up for consideration. After a discussion of the question of costs a resolution was passed asking an annual state appropriation of $300,000 for road improvement. Convict labor was considered and as the result a committee was appointed to investigate the matter with a view of future legislation. The subject of wide tires was also discussed with an idea of preventing the use of narrow tired vehicles on improved roads. It was finally decided to again bring the wide tire bill of the year before, known as the "Albertson bill," to the legislature and a committee was appointed to attend to this matter.

The following officers were elected for the ensuing year: Pres., Clayton Conrow; Vice-Pres., Dr. J. Stockton Hough; Secy. and Treas., E. G. Harrison; Asst. Secy., Charles T. Harrison; Executive Committee, James Owen, Colin E. Wise, J. J. Davidson, H. I. Budd.

THE CIVIL ENGINEERS' CLUB OF CLEVELAND.—The semi-monthly meeting of the club was held in the Case Library, Cleveland, O., Jan. 25. Mr. Samuel T. Dodd read the paper of the evening on the subject of "Power Consumption on Electric Railroads." He discussed the resistance developed by moving cars, and reviewed the formulas which have been in common use to express this resistance, and compared these results with a number of recent instances upon electric railroads. He concluded that modern experience shows that the old formulas, while giving results rather high at low velocities give too small resistances at high velocities when applied to electric motors. The author also discussed the question of acceleration and the power required to bring the car to a certain maximum velocity, and the number of seconds in which this may be accomplished. He adduced instances from the practice of several of the inter-urban roads about Cleveland and showed that about 400 lbs. per ton was the maximum horizontal effort to be expected from the electric motor. The paper was accompanied with a number of diagrams and tables illustrating the subject. The usual discussion followed. Mr. Germain then addressed the club and gave some outlines of a method by which he would utilize the current of flowing streams to obtain power for generating electricity or other purposes. He also described a plan of his for cooling the stoke-hole of an ocean steamer by distributing the current of cool air under the floor, allowing it to flow upwards through numerous openings.

Wm. H. Searles, Secy.

OHIO SOCIETY OF CIVIL ENGINEERS AND SURVEYORS.—As noticed in our issue of Jan. 13 this society held its annual meeting Jan. 19-20 at Columbus, O., in conjunction with the Ohio Institute of Mining Engineers. The list of papers to be read before the mining section was given in the issue mentioned. Those read before the civil engineering section are as follows: "Improvement of Country Roads," Jay F. Brown, Cleveland; Report of the Committee on City Engineering, Joseph Kinnear, Chn., Columbus; "Highway Improvement with a Sketch of Recent Practice in Greene County," G. A. McKay, Xenia; "The Legislature and the Roads," J. A. Hanlon, Coshocton; "Asphalt Pavements," C. H. Snow, Elyria; "Random Notes on the Construction of Brick Pavements," E. A. Kemmler, Columbus; Report of the Committee on Land Surveying, C. F. Abernethy, Chn., Circleville; "Some New Features of an Improved Solar Transit," J. B. Davis, Cleveland; "Field and Office Records," Hosea Paul, Cleveland; Report of the Committee on Land Drainage, D. W. Seitz, Chn., Ottawa; Report of the Committee on Railway Engineering, Wm. B. Hanlon, Chn., Cleveland; "Maintenance of Way on Railways," John W. Atkinson, Galion; Report of the Committee on Bridge Engineering, Harry J. Lewis, Chn., Pittsburg; "Spring Common Bridge," Youngstown; "Some Actual Bridges—Past and Present," H. L. Weber, Richmond; "Concrete Arches," W. H. Pratt, Mt. Vernon; "How to Secure a Topographical Survey of the State," Prof. Albert A. Wright, Oberlin; "The Economy of Combining Water-Works and Electric Light Plants," Burton J. Ashley, Chicago. Dr. J. L. Gilpatrick, Professor of Mathematics, Denison University, Granville, O., was elected president for 1898, and Cincinnati was selected as the next place of meeting.

SECOND MEETING OF THE JOINT COMMITTEE ON A NEW BUILDING CODE FOR NEW YORK CITY.—According to plan the "Joint Committee on New Building Code" (Eng. News, Jan. 20, 1898), met for the first time since adopting this name at the Builders' League, 74 W. 126th St., New York city, on Jan. 27. There were present eight delegates, but this number was increased later by the appearance of two or three more. The list of invited societies and individuals was considered, and the fact developed that replies had been received from one of the City Building Commissioners, the others apparently not regarding the invitation of enough importance to notice. Mr. Geo. A. Just said that invitation to the American Society of Civil Engineers had been received such a short time before the meeting of the Board of Directors that a reply could not be sent. In a discussion of the subject by the advisory board Mr. Just said that the sentiment seemed to be in favor of co-operation, should the present movement become general.

Mr. Fryer, as chairman of the committee appointed to attend the meeting of delegates at the Architectural League, stated that the committee had attended and found that the Architectural League had a movement on foot which was a sort of federation of every industry connected with building, including even stained glass workers and mural decorators. Its scope was very broad and they desired to make reforms in building laws, streets, lighting, parks, etc. When the time came he thought it quite probable that a subcommittee on building laws would be appointed by the federation to co-operate with the present joint committee.

The delegates present were then questioned as to their powers and what they were authorized to do by the organizations they represented. Considerable discussion followed regarding the method best suited to secure the appointment of a commission to revise the building laws, such commission to be made up of practical builders.

At this point Mr. Fryer gave up the chair and called attention to two bills recently introduced at Albany. He then read a section of an amendment to the New York building law introduced by Senator Grady. The section requires the insertion of fire stops between the floors of buildings. Mr. Fryer said that it looked to him as if some one was trying to get a patented affair into the building code for business reasons.

Further discussion followed upon the right of the state legislature to meddle with the New York city building laws since the adoption of the new charter. Mr. Just considered it advisable to appoint a legislative committee to keep track of bills introduced affecting the building interests of the city. The discussion following developed the fact that the legislative committees of the various building organizations composing the Joint Committee had the same function, thus making another similar committee superfluous. This subject was dropped and a motion passed to appoint a committee "to feel the pulse" of the municipal council and see what would be the best course to follow to secure a committee of experts satisfactory to builders.

It was considered improbable that the council would do anything in the matter until the Building Commissioners had become more familiar with the needs of their departments.

The meeting then adjourned until Feb. 17.

NEW PUBLICATIONS.

THE FORESTER.—The American Forestry Association, Washington, D. C. Paper, 8vo.; pp. 22; price, 10 cts.; $1 per year.

This is the first number of a monthly magazine, which is to be issued by the Association, and which will be devoted to the care and use of forests and forest trees. It contains an interesting article on "The Last White Pine," showing that the supplies which were styled "inexhaustible" a few years ago are now rapidly approaching exhaustion, a fact which even the lumber trade journals now admit. It is considered that no wood will form a satisfactory substitute, and that new forests of white pine will be established before the end of the next century.

AMERICAN FORESTRY ASSOCIATION.—Reports of the Special Meetings at Asheville, N. C., and Nashville, Tenn., Sept. 17-22, 1897, Together with an Address on "The Forests and Deserts of Arizona," by B. E. Fernow, LL. D. Washington, D. C.: Forestry Division U. S. Department of Agriculture. Paper; 6 × 9 ins.; pp. 69 to 174 of "Proceedings of the American Forestry Association." Price, 75 cts.

This volume contains several papers on the forestry and forest influences, including the two papers abstracted in our issue of Jan. 6, 1898; one by Mr. Geo. W. Rafter, M. Am. Soc. C. E., on "Stream Flow in Relation to Forests," and another by Mr. H. A. Hazen, on "Forest and Rainfall." The report also contains a paper by Mr. Dan W. Baird, on the "Effect of Forest Denudation on Water Courses and Water Supply," abstracted in our issue of Oct. 21, 1897.

A METHOD OF MEASURING THE PRESSURE AT ANY POINT ON A STRUCTURE, DUE TO WIND BLOWING AGAINST THAT STRUCTURE.—By Francis E. Nipher. Transaction of the Academy of Science of St. Louis, Mo. Vol. VIII., No. 1. Pamph., 9¾ × 6 ins.; pp. 21; illustrated.

After discussing the action and effect of wind pressure, within as well as outside a structure, Mr. Nipher describes an apparatus devised by him for collecting and indicating the pressure at any point on a building. The collector is made of two disks, clamping between them a porous layer, made of wire mesh, and communicating by a tube with an indicator, or gage. Experiments are given for testing the efficiency of this collector and its modifications. Justice cannot be done to these experiments in the space here available; but the results seem to fully warrant the claims of Mr. Nipher that such collectors can be profitably used in a study of the distribution of wind pressure on large buildings. The paper itself can doubtless be secured by addressing the Academy of Science, St. Louis, Mo.

SEEPAGE OF WATER IN NORTHERN UTAH.—Water Supply and Irrigation Papers of the U. S. Geological Survey, No. 7. By Samuel Fortier. Paper; 6 × 9 ins.; pp. 50; three plates and 13 figures in the text. Address Members of Congress or The Director, U. S. Geological Survey, Washington, D. C.

The term seepage water is used to denote moving ground water which gives rise to springs and swells the volume of streams. Among Western irrigators it is applied particularly to the water from irrigation canals and fields. The laws governing its flow, especially those relating to its amount, are of great importance in sections where irrigation is practiced, and notably when for any reason the full available yield of streams is in demand. Mr. Fortier, who is Professor of Irrigation Engineering in the Agricultural College at Logan, Utah, has confined his investigations of seepage water mainly to the Cache Valley, in northern Utah and Idaho. The bearing of an investigation of this sort upon irrigation problems is set forth in the paper, and the results obtained on the various streams are presented by means of diagrams and tables.

REPORT OF THE RAILROAD AND WAREHOUSE COMMISSION OF ILLINOIS FOR THE YEAR 1897.—Published by the Commission; Secretary, B. B. Ray, Springfield, Ill. Cloth; 8vo.; pp. 214; plates, 10.

The report shows a total mileage of 16,092 miles (an increase of 213¾ miles), with employees numbering 69,095. The average proportion of operating expenses to operating income was 66%. The report of Mr. Wm. T. Tarbet, Consulting Engineer of the Commission, refers to a special activity in the improvement of the roads, equipment and train service, and gives a list of the various classes of improvement. He also gives a list of matters calling for adverse criticism, including lack of attention to main line trestles, neglect to provide distinct signals at interlocking systems, bridge guard rails missing, excessive speed on curves elevated for low speed, etc. An interesting statement is to the effect that under the revised rules of the Commission, derails on high speed tracks must be at least 400 ft. from the fouling point. The bulk of the volume is devoted to statistics, reports of the railway companies and a digest of the railway laws. The plates are half-tone engravings of new bridges, etc.

SEWAGE IRRIGATION.—Water and Irrigation Papers of the United States Geological Survey, No. 3. By Geo. W. Rafter, M. Am. Soc. C. E. Paper; 6 × 9 ins.; pp. 100; four plates and 28 figures in the text. Address Members of Congress or The Director, U. S. Geological Survey, Washington, D. C.

This paper is really a short treatise on the theory and practice of sewage purification, more particularly the application of sewage to land. Examples of actual practice are more especially confined to European cities, but the manuscript for a second paper, dealing with American practice, has been prepared by the author and will be published later. This paper includes some notes on sewage farming in England and the continent of Europe made by Mr. Rafter while abroad a few years ago; also abstracts from the most recent available reports and papers relating to sewage farming abroad.

The difference between the wages of the employees on English sewage farms and those of farm hands in this country, Mr. Rafter concludes from his investigations, is less than has commonly been supposed. He also concludes that the actual and potential demand for sewage for irrigation is greater in this country than he had previously thought, even in the Eastern states. These two conclusions, possibly combined with others, lead Mr. Rafter to look even more favorably than before upon the possibilities of sewage farming in America.

TRADE PUBLICATIONS.

(The standard sizes for pamphlets and trade catalogues recommended by all the principal engineering societies of the United States are: 3 1-2 x 6 ins.; 6 x 9 ins., and 9 x 12 ins.)

DUPLEX MINE PUMPS.—The Snow Steam Pump Works, Buffalo, N. Y. Paper; pp. 18; illustrated.

This circular is made up entirely of illustrations of different kinds of mine pumps, except one interior view of the works.

THE INSULATION OF RAILS.—New York Rail Insulation and Equipment Co., Newark, N. J. Pamph., 3½ × 6½ ins.; pp. 12; illustrated.

This pamphlet illustrates and describes briefly the indurated fiber rail insulation manufactured by the above company.

WOOD, WROUGHT IRON AND STEEL TACKLE BLOCKS.—Western Block Co., Lockport, N. Y. Cloth, 6 × 9 ins.; pp. 48; illustrated.

This is a catalogue of the "Anchor Brand" tackle blocks, sheaves, tackle hooks and thimbles, dead eyes, bull's eyes, etc., manufactured by the above company.

PAVING BRICK.—Purington Paving Brick Co., Galesburg, Ill. Pamph., 6 × 3¼ ins.; pp. 8.

The object of this pamphlet is to impart general information relating to the use of vitrified brick for a paving material. The subjects discussed are: Foundations; smoothness of brick pavements; ease of repairs; healthfulness; durability, etc.

WATER METERS.—Hersey Manufacturing Co., South Boston, Mass. Paper; not paged; illustrated.

This is a very complete descriptive priced catalogue of the Hersey water meter, made in sizes ranging from ½ to 6 ins. It also includes meter connections, fish traps and dial extensions. The company also makes and issues separate catalogues of rotary dryers, sugar, soap and malt machinery.

ARTISTS' MATERIALS.—Frost & Adams Co., 37 Cornhill, Boston, Mass. Paper; 6¾ × 4¼ ins.; pp. 194.

This is a well arranged, illustrated and very complete priced catalogue of all manner of artists' materials, drafting paper, office and studio furniture and mathematical instruments imported or handled by this firm. Included in it is a list of hand-books and text-books on art, mechanical drawing, etc.

HEATING FURNACES.—Estate of P. D. Beckwith, Dowagiac, Mich. Paper, 4½ × 6½ ins.; pp. 30.

The "Round Oak" furnace described in this pamphlet is for heating houses, etc., and will burn any kind of coal, as well as wood. Two of these furnaces are used to heat the signal tower at the interlocking plant at State Line, described in our issue of Jan. 30.

DRAIN TILE AND PIPE.—Jackson Brothers, New York State Drain Tile and Pipe Works, Third Ave., Albany, N. Y. Pamphlet; 9¾ × 6½ ins.; pp. 16; illustrated.

This is a price list of the various manufactures of this firm; including fire brick, chimney and flue linings, chimney tops, sewer pipe, drain tile of all kinds, building and ornamental brick, encaustic sidewalk tile, hydraulic cement, etc. Solid cast steel draining tools are also handled by this firm.

PNEUMATIC HAMMERS.—The Ridgely & Johnson Tool Co., Springfield, Ill. Paper, 7 × 5¼ ins.; pp. 24.

This pamphlet describes different forms of pneumatic calking hammers, riveters and a rivet hold-on to take the place of the ordinary sledge or dolly-bar. A yoke riveter used in bridge, ship and boiler work is suspended from a derrick or frame and has the riveting hammer on one leg of the horseshoe yoke and the hold-on on the other leg.

CONTRACTORS' PLANT.—Contractors' Plant Mfg. Co., Buffalo, N. Y. Paper, 7 × 10 ins.; pp. 140; illustrated.

This is a catalogue and price list of steam, horse and hand power hoisting machinery, derricks, wrought iron and steel tackle blocks, sheaves, wire rope, contractors' plows, etc., manufactured by the above company. The various machines and supplies are quite fully described and illustrated and a good index enables any article to be referred to easily.

BICYCLES.—Eighth Annual Catalogue of the Geo. N. Pierce Co., Buffalo, N. Y. Paper, 5½ × 7½ ins.; pp. 32; illustrated.

The 1898 models of the Pierce wheels are described in this catalogue and their claims for superiority and their prices are given. The principal new features mentioned are the placing of the brake inside the steering head and a pneumatic cushion-frame wheel. The Pierce wheels have a well-merited reputation for general excellence.

SLIDING GRATE.—Jarvis Mfg. Co., Chicago, Ill. Paper, 8 × 5½ ins.; pp. 20.

This pamphlet describes the Jarvis sliding grate for locomotive, marine and stationary boilers. Transverse bars carry rocking finger bars which normally stand end to end. In shaking, however, alternate bars slide backward and forward, the finger bars then interlocking and breaking up the clinkers by being given a rocking motion while in this interlocked position.

ENGINEERING AND DRAWING INSTRUMENTS.—W. & L. E. Gurley, Troy, N. Y. Cloth, 4¾ × 7 ins.; pp. 440.

This is the 32d edition of "Gurley's Manual," a descriptive catalogue and price list, the first part of which contains much information as to the special features of this firm's instruments for astronomers, engineers and surveyors, with explanations regarding the use and adjustment of the instruments. There are also tables of declination and traverse tables. The second part is a catalogue of drawing instruments and materials.

CAR COUPLERS.—**The Railroad Supply Co., Chicago, Ill.** Paper, 9 × 6 ins.; **pp. 44.**

This is devoted to a description of the Hien coupler (which is claimed to be an improvement upon the ordinary M. C. B. coupler), and to a discussion of defects in the ordinary M. C. B. couplers. The details of the several parts are well shown by numerous engravings. The Barr vestibule, Wolhaupter tie-plate and cattle guard, "Economy" journal-box lifter, "Anchor" tie-plate rail-brace, and "Chicago" curving signal are also shown.

FIRE DEPARTMENT SUPPLIES.—Andrew J. Morse & Son, 140 Congress St., Boston, Mass. Paper, 7 × 10 ins.; pp. 57; illustrated.

This is a priced catalogue of all sorts of supplies for the use of fire departments; also of diving apparatus and submarine armor. The firm makes the Monitor fire nozzle for fire boats, mills and elevators. This nozzle can be set by means of a lever to throw streams in any horizontal direction and with a variation from the perpendicular to 10° below the horizontal. A separate catalogue is published describing this device in more detail.

EXTENSIBLE TRENCH BRACES.—The Dunn Manufacturing Co., Penn Building, Pittsburg, Pa. Pamphlet; 7 × 5 ins.; pp. 12; fully illustrated.

These patent extensible trench braces are being largely used for supporting the sides of excavations. The screws are made of 1½ and 2-in. forged wrought iron; are double-threaded and quick-acting. The brace pipe can be made detachable; or timber can be used for the brace, and the shoe is fitted with a ball-joint. The brace and its appliances are fully illustrated and priced, and views are given of its application in sewer work.

DRAFTING ROOM FURNITURE.—Morse Machine Co., Rochester, N. Y. Pamphlet; 8½ × 5½ ins.; pp. 17; illustrated.

The drawing tables here illustrated and priced are intended to cover every desirable adjustment and to include every attachment for the purpose. These tables are made with single or double columns, according to size, and are all rigid when clamped. The other furniture includes drawing-boards, drawing-board cabinets, paper cabinet and cutter, cabinets for filing drawings and blue-print apparatus.

CAST-IRON PIPE.—South Pittsburg Pipe Works, South Pittsburg, Tenn. Cloth, 7 × 4½ ins.; pp. 31; illustrated.

The natural advantages of this locality for the manufacture of iron pipe is first described, together with the plant of the establishment. Weights, thickness and standards of cast-iron water and gas pipes are next discussed and indicated by tables, along with branch and special castings. The method of ordering pipes or specials is indicated and the pamphlet closes with some good general information upon the subject of pipe-laying, discharge, velocities, friction head, etc.

SOLAR TRANSIT.—Ulmer & Hoff, 224 Champlain St., Cleveland, O. Pamphlet; 7½ × 5 ins.; pp. 16; illustrated.

This pamphlet is devoted to a description of the principles upon which the new solar transit, of Mr. J. B. Davis, is constructed, and upon which its operation is based. The chief advantage claimed for this instrument is the elimination of solar adjustments when this transit is used for solar work. Previous instruments of this class required the maintenance of these adjustments in addition to those of the engineer's and surveyor's transit.

TRENCH MACHINE.—The Carson Trench Machine Co., 16 Dorrance St., Charlestown, Boston, Mass. Paper, 9 × 6 ins.; illustrated.

The three handsome catalogues of this company describe and illustrate the various appliances manufactured for excavating and refilling trenches and for conveying the material. These include the Carson trench machine, in favorable use for about 20 years in sewer construction; the Carson-Trainor hoister and conveyor, and the Carson-Lidgerwood cableway. These are fully described and handsomely illustrated, and many testimonials are given showing the saving effected by their use.

ASPHALT PAVEMENT.—**The Barber Asphalt Paving Co., New York.** Paper; 7½ × 5 ins; pp. 112; illustrated by half-tone engravings and maps.

This handsomely printed catalogue gives a list, to date, of the places where this company has laid asphalt pavement; together with the sq. yds. of surface laid in each place and maps of larger cities with the location of asphalt pavement marked in red. The several classes of asphalt pavements, A to D, inclusive, are described, and photographic views are given of streets in various cities, before and after asphalting; of the refining plants of the company, the apparatus used, etc.

BOILER FEEDER.—**The Q. & C. Co., Chicago. Paper; 9 × 12 ins.; pp. 54.**

This is a very handsome pamphlet describing the Scott gravity feed for high pressure boilers, which not only supplies the feed water but also maintains a constant water level in the boiler. It contains an interesting discussion on methods of supplying feed water, with the steam consumed by these methods, and has a report of tests by R. W. Hunt & Co., showing a steam consumption of 88% less than that of a pump supplying the same boilers. It also contains tables of properties of saturated steam and weight of and heat-merits in water, taken from Kent's "Mechanical Engineer's Pocket Book."

HOISTING ENGINES.—J. S. Mundy, Newark, N. J. Pamph., 11 × 7½ ins.; pp. 72; illustrated.

This is an illustrated catalogue and price list of mining, quarry, dredging and general contractors' hoisting engines, boilers and fixtures manufactured by the above firm. A standard feature of these engines is the Mundy friction drum, the principal feature of which is its accurate regulation by the operator. The drum is mounted loose on the drum shaft, which carries the clutch and may by the simple regulation of the operating lever be made to revolve fast or slow, with the engine running at the same speed, either in the direction of the engine shaft or in the reverse direction.

SILICA GRAPHITE PAINT.—Joseph Dixon Crucible Co., Jersey City, N. J. Pamphlet; 9 × 6 ins.

The manufacture of graphite paint commenced about 30 years ago at the Dixon Crucible Company's mines, at Ticonderoga; although graphite paint had previously been used there by local painters. The tests of this paint have been therefore long continued, and this pamphlet is devoted to showing its chemical advantages as a protective and lasting paint, and to comparing it with other pigments. Accompanying this is another pamphlet containing some testimonial letters concerning silica graphite paint from prominent corporations using it; and still another publication comparing the merits of lead paints and the graphite compound.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Bids to be opened.	Work.	Place.	See Eng News.
Feb. 3.	Widening bridge, Washington, D. C. Advertised, Engineering News, Jan. 6.		Jan. 6
Feb. 3.	Bridge foundations, Boston, Mass. Advertised, Engineering News, Jan. 27.		Jan. 27
Feb. 3.	Arc dynamos (2), wiring, etc.,	Jersey City.	Jan. 27
Feb. 3.	Pipe sewers,	Erie, Pa.	Feb. 3
Feb. 3.	Electric wiring, etc.,	Central Islip, N. Y.	Feb. 3
Feb. 4.	Brick paving (18,000 sq. yds.). Advertised, Engineering News, Jan. 27.	Hazleton, Pa.	Jan. 27
Feb. 4.	Pier work,	New York, N. Y.	Jan. 27
Feb. 4.	School building,	Chicago, Ill.	Jan. 27
Feb. 5.	Steel bridge,	Cincinnati, O.	Jan. 13
Feb. 5.	Water-works, etc.,	Rapid City, S. Dak.	Jan. 13
Feb. 5.	Sewerage system, etc.,	Rapid City, S. Dak.	Jan. 13
Feb. 5.	Water-works,	Elkpoint, S. Dak.	Jan. 6
Feb. 5.	Sidewalk brick,	Canton, O.	Jan. 27
Feb. 5.	School buildings (2),	Cranford, N. J.	Feb. 3
Feb. 7.	Lowering sewer,	St. Paul, Minn.	Feb. 3
Feb. 7.	Paving blocks (1,100,0000),	Boston, Mass.	Feb. 3
Feb. 7.	Fire hose (1,000 ft.),	South Bethlehem, Pa.	Feb. 3
Feb. 7.	Reservoir, Braddock, Pa. Advertised, Eng. News, Feb. 3 and 10.		Feb. 3
Feb. 7.	Steel bridge,	Greenwood, Mo.	Feb. 3
Feb. 7.	Capitol building,	Harrisburg, Pa.	Jan. 27
Feb. 7.	Brick and pipe sewers,	Atlanta, Ga.	Jan. 27
Feb. 7.	Filling lots,	Albany, N. Y.	Jan. 27
Feb. 7.	Cement sidewalks,	Muncie, Ind.	Jan. 13
Feb. 7.	Grading, etc.,	North Stonington, R. I.	Jan. 13
Feb. 7.	Motor vans (garbage)	Wolverhampton, Eng.	Jan. 13
Feb. 7.	Heating system,	Philadelphia, Pa.	Feb. 3
Feb. 7.	Asylum buildings,	San Antonio, Tex.	Feb. 3
Feb. 8.	Navy yard supplies,	Mare Island, Cal.	Jan. 20
Feb. 8.	Hospital building,	Willows, Cal.	Jan. 20
Feb. 8.	Capitol building,	Helena, Mont.	Jan. 20
Feb. 8.	Heating,	Stockton, Cal.	Jan. 20
Feb. 8.	Hospital building,	Punxsutawney, Pa.	Jan. 27
Feb. 8.	Light and water bonds,	Ortonville, Minn.	Jan. 27
Feb. 8.	Boiler,	Bay City, Mich.	Feb. 3
Feb. 8.	Whale boat,	Biloxi, Miss.	Feb. 3
Feb. 8.	Lift bridge,	Rochester, N. Y.	Feb. 3
Feb. 8.	Electric light plant,	Washington, La.	Feb. 3
Feb. 9.	Electric light plant,	Norristown, Pa.	Jan. 27
Feb. 9.	Tunnel,	San Diego, Cal.	Jan. 27
Feb. 9.	Jetties and shore protection. Advertised, Engineering News, Jan. 27.	Cleveland, O.	Jan. 27
Feb. 9.	Macadamizing (5,320 ft.),	Burlington, Vt.	Jan. 20
Feb. 10.	Electric light plant, Advertised, Engineering News, Jan. 20.	Gallatin, Mo.	Jan. 20
Feb. 10.	Water-works, Advertised, Engineering News, Jan. 20.	Gallatin, Mo.	Jan. 20
Feb. 10.	Tower,	Savannah, Ga.	Jan. 20
Feb. 10.	Lock, dam, etc., Advertised, Eng. News, Jan. 6 to 27.	Yamhill River, Ore.	Jan. 6
Feb. 10.	Library,	Pt. Elizabeth, Cape Good Hope.	Nov. 25
Feb. 10.	Parkway,	Buffalo, N. Y.	Jan. 27
Feb. 10.	School building,	Wilkinsburg, Pa.	Feb. 3
Feb. 10.	Boiler covering, etc.,	Chicago, Ill.	Feb. 3
Feb. 10.	County bridges,	Des Moines, Ia.	Feb. 3
Feb. 11.	College buildings,	Missoula, Mont.	Jan. 20
Feb. 11.	Bridge,	Vancouver, Wash.	Feb. 3
Feb. 11.	Dam (400 ft. long),	Duquoin, Ill.	Feb. 3
Feb. 12.	Gas under franchise,	Painesville, O.	Feb. 3
Feb. 12.	Sewers,	Norwood, O.	Jan. 27
Feb. 12.	Macadamizing, etc.,	Norwood, O.	Jan. 27
Feb. 12.	Court house,	New Braunfels, Tex.	Feb. 3
Feb. 12.	Heating, etc.,	Binghamton, N. Y.	Feb. 3
Feb. 14.	Garbage disposal plant, Advertised, Eng. News, Jan. 20 and 27.	La Fayette, Ind.	Jan. 20
Feb. 14.	Bridge (96-ft.),	Vermillion, S. Dak.	Feb. 3
Feb. 14.	Steel bridge, Advertised, Eng. News, Feb. 3 and 10.	Woonsocket, R. I.	Feb. 3
Feb. 15.	Sewers, flushtanks, etc.,	Glenville, O.	Feb. 3
Feb. 15.	Steam road roller,	South Bend, Ind.	Feb. 3
Feb. 15.	Asylum building,	West Bend, Wis.	Feb. 3
Feb. 15.	Plans for jail,	Hampton, Va.	Feb. 3
Feb. 15.	Hire of dredging plant, Advertised, Eng. News, Jan. 20 to Feb. 10.	Mobile, Ala.	Jan. 20
Feb. 15.	Shore protection, etc., Advertised, Eng. News, Jan. 20 to Feb. 10.	Ft. Morgan, Ala.	Jan. 20
Feb. 15.	Trunk sewer,	Jersey City, N. J.	Dec. 23
Feb. 15.	Filtration plant, Advertised, Eng. News, Jan. 6 to 27.	Albany, N. Y.	Jan. 6
Feb. 15.	Macadamizing, etc.,	Mount Vernon, N. Y.	Jan. 27
Feb. 16.	County bridges,	York, Neb.	Jan. 20
Feb. 18.	Post office building, Advertised, Eng. News, Jan. 27 and Feb. 3.	South Omaha, Neb.	Jan. 27
Feb. 18.	Canal bonds ($3,230,000),	Albany, N. Y.	Feb. 3
Feb. 19.	Bonds,	Charleston, S. C.	Feb. 3
Feb. 19.	Lodge building,	Gibsonburg, O.	Feb. 3
Feb. 20.	Canal, bridges, etc.,	Helena, Mont.	Feb. 3
Feb. 21.	Vault, etc.,	Halletsville, Tex.	Dec. 23
Feb. 21.	Extending pier,	Margaree, N. S.	Jan. 13
Feb. 21.	Steel tow-boat,	Memphis, Tenn.	Jan. 27
Feb. 21.	Public building,	Barnesville, O.	Feb. 3
Feb. 23.	Laying water pipe, etc., Advertised, Engineering News, Jan. 27.	Westfield, Mass.	Jan. 27
Feb. 23.	Water pump (3,000,000 galls.), Advertised, Engineering News, Jan. 27.	Erie, Pa.	Jan. 27
Feb. 23.	Water supply,	Jersey City, N. J.	Jan. 13
Feb. 24.	Water pipe,	Fort Harrison, Mont.	Jan. 27
Feb. 24.	Sewers, etc.,	Cleveland, O.	Feb. 3
Feb. 26.	Purchase l't and water plant,	Brunswick, Ga.	Jan. 20
Feb. 28.	Sewers, Advertised, Eng. News, Feb. 3 to 24.	Tampa, Fla.	Feb. 3
Feb. 28.	Steel towers, etc., Advertised, Eng. News, Feb. 3 to 24.	New York.	Feb. 3
Feb. 28.	Dredging, Advertised, Eng. News, Feb. 3 to 24.	Keweenaw Pt., Mich.	Feb. 3
Feb. 28.	School buildings,	Anadarko, Okla.	Feb. 3
Feb. 28.	Harbor work,	Pernambuco, Brazil.	Jan. 13
Mar. 1.	Railway,	Henrietta, Tex.	Jan. 13
Mar. 1.	Church building,	Melrose, Minn.	Jan. 27
Mar. 1.	Naval supplies,	Mare Island, Cal.	Feb. 3
Mar. 2.	Gravel roads, Advertised, Eng. News, Feb. 3 to 24.	Atlantic county, N. J.	Feb. 3
Mar. 7.	School bonds ($80,000),	Toledo, O.	Jan. 20
Mar. 7.	Refitting vault,	Waukegan, Ill.	Jan. 20
Mar. 8.	Jail building,	Madera Cal.	Jan. 20
Mar. 10.	Dredging, Advertised, Eng. News, Feb. 3 to 24.	Oakland Harbor, Cal.	Feb. 3
Mar. 15.	Steel submerged water pipe, Advertised, Eng. News, Feb. 3 to Mar. 3.	Portland, Ore.	Feb. 3
Apr. 2.	School building,	Brandon, Minn.	Feb. 3
Apr. 4.	Wharf franchise,	Summerland, Cal.	Jan. 27
Apr. 30.	Town hall,	Singapore, S. S.	Jan. 13
May 1.	Plans for sewage disposal,	Belper, Eng.	Dec. 16
July 1.	Water power,	Madras, India.	Oct. 28
No date.	Railroad work,	Calais, Me.	Feb. 3
No date.	Dwellings (24),	Philadelphia, Pa.	Feb. 3
No date.	Electric railway (2½ miles), Advertised, Eng. News, Feb. 3.	Clinton, N. J.	Feb. 3

RAILWAYS.

ALASKA.—Press reports state that the Dominion of Canada has contracted with W. Mackenzie and D. Mann for the construction of a railway from a point near Telegraph Creek, at the headwaters of the Stickeen River, to Teslin Lake, so as to connect with navigation to Dawson City and the Yukon gold fields. The length of the road will be about 130 miles. The Government has agreed with the contractors to give 25,000 acres of land a mile as a subsidy. It is expected to complete the railway in time to permit the sending of supplies into the Yukon district before next winter sets in.

ARKANSAS CENTRAL.—N. B. Kindall, Gen. Mgr., Fort Smith, Ark., informs us that the right of way has been obtained for 44 miles of this proposed railway from Fort Smith to Hot Springs, via Little Rock, Ark., a total distance of 185 miles. Capital for construction has been secured. The company is doing its own work, and already has 28 miles of the road graded and bridged and 18 miles of track laid. Pres., C. C. Godman, Fort Smith.

DEEPWATER.—This company has been organized, according to reports, for the construction of a railway from Deepwater to Upper Loup Creek, the distance to be about 60 miles. Abram S. Hewitt, 17 Burling Slip, New York, is said to be interested. The incorporators are; Wm. N. Page, Chas. P. Howard, R. C. Taylor and G. W. Imbaden, of Ansted, W. Va.; Thos. D. Ransom, Staunton, W. Va. Capital stock, $75,000.

DELAWARE & HUDSON CANAL CO.—Our correspondent informs us that this company has presented a plan to the council of Schenectady, N. Y., for the abolition of grade crossings on Centre, Pine, Fonda, Nott and Romeyn Sts., north of Union St. It is also proposed to build a new freight house, which will be situated on the company's property, instead of on state land, as is the present building. Several of the streets would have to be deviated slightly from their present course and at least one would have to be opened for a short distance. The estimated cost of the improvements is $140,000. As the company desires to hasten the work, some quicker plan than the usual one of referring it to the state railroad commission may be decided upon between the authorities of the city and the company. R. H. Brown, Ch. Engr., Albany, N. Y.

GILA VALLEY, GLOBE & NORTHERN.—Reports state that work on the construction of the proposed extension of this line, from Geronimo to Globe, Ariz., a distance of 60 miles, will begin about March. The Midland Construction Co. holds the contract. Pres., William Garland, 313 Stimson Bldg., Los Angeles, Cal.

GREIGSVILLE & PEARL CREEK.—The New York state railroad commission has granted this company the necessary permission to build a steam railway from Greigsville to Pearl Creek, N. Y., a distance of 10 miles. The company was incorporated in September, with a capital stock of $100,000, by Edward L. Fuller, Scranton, Pa.; Joseph M. Smith, Lyon, Mass., and others.

HIDALGO NORTHERN.—Press reports state that negotiations are now pending for the sale of this railway to English and Mexican capitalists. It is expected that the deal will be consummated in a few days, and that the work of extending the road to Tampico will be begun at once. The concession and final survey for this proposed extension was obtained some time ago, and the final survey has already been made. The construction work will be very heavy, owing to a rough range of mountains that must be crossed. When completed this line will shorten the distance between the City of Mexico and Tampico by rail by nearly 200 miles.

IAEGER & SOUTHERN.—This company was incorporated in West Virginia, Jan. 21, with a capital stock of $25,000. It is proposed to construct a railway from or near Iaeger, on the Norfolk & Western Ry., to the mouth of Jacob's Fork on the Sandy River. The principal office is to be at Welch, W. Va. The incorporators are: William Ritter, Jas. L. Hamill, R. E. Pendleton and B. F. Keller; Jas. F. Brown, Charleston, W. Va.

ILLINOIS.—The council of Chicago, Ill., Jan. 24, passed two track elevation ordinances which, if accepted by the railroad companies, will almost complete the work of elevation south of 18th St. One ordinance provides for the elevation of the tracks of the Santa Fe, the Panhandle, the Alton, the Union Stock Yards & Transit Co., the Chicago Terminal Transfer Co., and the Chicago, Madison & Northern R. R. Co., from 18th St. to the Illinois & Michigan Canal and along Rockwell St. The second ordinance provides for the elevation of the tracks of the Burlington Road from the Blue Island Ave. viaduct to the city limits at West 46th St. This would require a total elevation of 32 miles of track.

MAINE.—Bids are being asked by R. F. Rivinac, Calais, Me., for 25 miles of railroad work, also a lot of pile-driving, trestle and masonry work.

MISSOURI, OKLAHOMA & TEXAS.—A. T. Foster, Pres., Tecumseh, Okla., informs us that the proposed route of this line is from Henrietta, Tex., to Coffeyville, Kan., via Tecumseh, Okla., with a branch to Wagoner, Ind. Ter., a total distance of 380 miles. Preliminary surveys are now being made; locating and cross sectioning will be done next month, when contracts will be let for the first 40 miles north from Tecumseh. The capital for the construction is in sight, and when the work is commenced it will be pushed forward as rapidly as possible. T. D. McDonough, Ch. Engr., Tecumseh, Okla.

NEBRASKA, KANSAS & GULF.—This company was incorporated in Kansas, Jan. 29, with a capital stock of $26,000,000, to build a railway from the confluence of the Niobrara and Missouri rivers, in Nebraska, to some point on the Gulf in Texas. In Kansas it will pass through Jewell, Mitchell, Lincoln, Rice, Kingman, Reno, Harper, Barber and Sumner counties, for a distance of 1,100 miles. The directors are: James McKinstry, of Kansas City, Mo.; John Martin, of Topeka, Kan.; John P. Breston of Little River, Kan.; Francis H. Pecke, W. H. Dennison, Edward Roemer and Robert G. Weeks, of New York.

NEW YORK & OTTAWA.—Geo. W. Parker, Pres., Cornwall, Ont., writes us that the grading, bridging and tracklaying on the Canadian division of this new line is completed between Cornwall and the Junction of the Canada Atlantic Ry., five miles southeast of Ottawa, making a total of 50 miles and a fraction. As a portion of this track was laid since snow and frost set in it will not be possible to operate it until spring, when work will be resumed and the track ballasted with gravel. Between 10 and 12 miles are now ballasted. The telegraph line and fencing are well under way and will be completed early in the spring; the same is true of station houses. On the New York side the principal portion of the grading between St. Lawrence River and Moira is completed, and the metal bridges over the St. Regis and Rackett rivers are well under way. The St. Lawrence bridge, which is being constructed at this point, is also well advanced, the piers in the south channel being nearly completed, and the steel for both channels being manufactured and for the most part on the ground ready for erection. This bridge is composed of two divisions, spanning the channels on either side of Cornwall Island, each division being 1,125 ft. in length and high enough to avoid interference with navigation. In addition to this there is a drawbridge over the canal on the Canadian side. Work will be resumed in the spring by Balch & Peppard, of Minneapolis, Minn., Chief Contractors. The road is of first-class construction in every particular, including metal bridges, and the contract calls for a thorough construction, including ballast fences, equipment and everything necessary to constitute a completed line, with 65-lb. rails of 33 ft. lengths, made by the Johnson Co., of Lorain, O. It is hoped to have the division now under contract, including bridges, completed by July 1.

NORTHERN MINNESOTA & WISCONSIN. — D. F. Brooks, Pres., St. Paul, Minn., informs us that eight miles of this line are already completed, and that the capital necessary for completion has been secured. Clouye & Hurd are the contractors. The company was incorporated in Minnesota, Jan. 9, to build a steam railway 15 miles in length from Nickerson, Minn.

NORTHERN OHIO.—Press reports state that engineers of this company are at present at Akron, O., to make surveys eastward preparatory to the extension of the line to New Castle and Pittsburg, Pa. Pres., H. L. Brice, Lima, O.

PEORIA & ST. LOUIS.—It is announced that the construction of this railway, between Green Valley and Springfield, Ill., a distance of 48 miles, will soon be started, so as to complete the same by July 1.

PHILADELPHIA & EASTERN.—This company was incorporated in Pennsylvania, Jan. 31, with a capital stock of $250,000, to build a railway through Philadelphia and Bucks counties to connect with the Philadelphia, Newtown & New York R. R. below Foxchase, a suburb of Philadelphia, to a point on the Delaware River, opposite Trenton, N. J.

TALLAHASSE & SOUTHEASTERN.—R. L. Bennett, Vice-Pres. Florida Construction Co., Tallahassee, Fla., informs us that this company will build the first two 20-mile sections of the Tallahassee & Southeastern R. R. and the first 20-mile section of the Tallahassee Western R. R. The manner of constructing the balance is not yet decided.

WASHINGTON. — Press reports state that Frank C. Ross has applied to the council of Seattle, Wash., for a franchise to construct and operate a standard gage railway over the tide flats to Duwamish head. This is a preliminary step towards the construction of a shore line from Seattle to Tacoma.

WESTERN MARYLAND.—Reports state that this company has decided to build an extension of its line from Hagerstown, Md., to a point on the Baltimore & Cumberland Valley road, north of Waynesboro, Pa., in order to relieve through freight business over the heavy mountain grades. C. O. Vandeventer, Ch. Asst. Engr., Baltimore, Md.

WISCASSET & QUEBEC.—W. F. P. Fogg, Gen. Mgr., Wiscasset, Me., informs us that the construction of this new line of railway in Maine has been much impeded of late by the severe weather and controversy with the Maine Central R. R. Co. It is not expected to build beyond Pittsfield, Me., this year, but a branch will be built from Week's Mills to Waterville. Pres., A. M. Card, Wiscasset.

STREET AND ELECTRIC RAILWAYS.

WESTBROOK, ME.—It is reported that the surveys have just been completed for the proposed Westbrook, Windham & Harrison Electric Ry. and that work will probably begin April 1. A. S. Dickinson, Engr.

AMHERST, MASS.—The Amherst & Sunderland St. Ry. Co. has been granted a franchise to build an extension of its line from Mill Valley to the Hadley line. Pres., W. D. Cowls.

HOLYOKE, MASS.—W. S. Loomis, Pres. Holyoke St. Ry. Co., is said to have been appointed a committee to investigate the feasibility of constructing an electric railway from the terminus of the Holyoke St. Ry. over the mountain to connect with the Northampton St. Ry. at Easthampton.

ROCKVILLE, CONN.—F. A. Randall, Rockville, informs us that the Hartford, Manchester & Rockville Tramway Co.'s line in this town is completed from Burnside to Market St., and that the company agrees to continue from Market St. to East St., ½ mile farther, in the spring. Gen. Mgr., H. J. Wickham, Manchester, Conn.

DELHI, N. Y.—S. P. Wilbur, Mgr., Delaware Valley Ry. Co., Delhi, informs us that the preliminary surveys are now being made for this proposed trolley line from Delhi to Andes, with a branch to Bovina, by E. F. Musson, of Norwich, N. Y., and Herman Herring, of Walton, N. Y. The stock has all been sold but no bonds have yet been issued. The railway will be standard gage, 15 miles long, and will pass through a rich dairy and milk producing country; passengers and freights will both be carried. Pres., Henry Davie, Delhi.

NEW YORK, N. Y.—The Fort George & Eleventh Avenue R. R. Co. was incorporated Jan. 31, with a capital stock of $10,000, to construct a railway 1,500 ft. in length, to be operated by a motive power other than steam on the Boulevard or Eleventh Avenue, from Kings Bridge Road to 175th St. The directors are John T. Little, Jr., Robert S. Johnstone, C. R. La Rue, F. C. Garrick, Thomas Hanlon, Jr., and Harry J. Turner, of New York; Clement M. Cumming, of Yonkers, N. Y.; J. Howard Brouse, of Mount Vernon, N. Y.; C. A. Gilbert, of White Plains, N. Y.—— Press reports state that the People's Traction Co. and the Connecticut Traction Co. were consolidated Jan. 28, and that the new company will be controlled by the syndicate headed by P. H. Flynn and W. A. Boland, of 31 Nassau St., which built the Nassau Electric R. R. in Brooklyn. It is proposed to build the lines provided for in the franchises owned by these companies, and it is said that work will commence as soon as litigation with the Union Ry. Co. is disposed of. The new system will operate between East 134th and 187th Sts., and the Harlem and Bronx Rivers, with a total mileage of about 60 miles. The directors are: P. H. Flynn, W. A. Boland, John McCarthy, Silas B. Dutcher, F. C. Cocheu, Joseph White and M. J. Kennedy.

NIAGARA FALLS, N. Y.—Assemblyman Hill has introduced a bill into the legislature to incorporate the Niagara River Tramway Co., with a capital stock of $50,000. The incorporators named in the bill are: George W. Pound, Lockport, N. Y.; L. Clarke Raymond, Welland, Ont.; Robert N. Campbell, William B. Ditmick, Seward A. Simons and Frank F. Williams, Buffalo; A. Monte Cutler, New York. It is proposed to construct and operate a cable tramway over and along the Niagara River in the counties of Erie and Niagara, and from the American side to the Canadian shore of the river. The company has already received a charter from the Canadian government.

RYE, N. Y.—S. H. Graham, Highway Comr., P. O. Box 188, Rye, informs us that the Portchester Electric R. R. Co. has secured a franchise to build an electric line from Portchester to Rye and Rye Beach, 4 miles, and that a portion of the same has been built by John O. Merritt, of Portchester, N. Y. Ch. Engr., A. J. Kirby, Portchester.

CLINTON, N. J.—Correspondence is asked for constructing a trolley road about 2½ miles long, as stated in our advertising columns. Address Lock Box 146, Clinton, N. J.

SOMERVILLE, N. J.—The New York & Philadelphia Traction Co. was granted a franchise by the commissioners of this town, Jan. 24, to build its proposed railway to Philadelphia through the town. This shuts out the Brunswick Traction Co., which has already built 7 miles of its proposed line connecting Raritan and Somerville with New Brunswick.

WASHINGTON, D. C.—Wm. A. Heindle, Ch. Engr., 11th and Florida Aves., N. W., informs us that a petition is now before Congress for permission to consolidate the Eckington & Soldier's Home Ry., the Belt Ry. and the Columbia & Maryland R. R. companies under the name of the City & Suburban Ry. Co. of Washington. The Eckington & Soldier's Home and the Belt Rys., within the city limits, are to be equipped with the underground electric conduit system. The portion of the Columbia & Maryland R. R., which is partly constructed, will be completed to Berwyn, about 9 miles from the Treasury Building in the city, and will be operated by the overhead trolley. As all of these lines are owned by the same people, upon consolidation, work will begin at once. Pres., O. T. Crosby, 1417 G St., N. W.

FAIRMONT, W. VA.—The Fairmont Elecric Ry. Co. was incorporated Jan. 27 to operate an electric street railway in Fairmont and through the counties of Marion, Monongahela and Harrison. The incorporators are: John B. Crane, Charles E. Manley, A. Howard Fleming and Owen S. McKinney, of Fairmont; Thomas W. Fleming, of New York.

NEWARK, O.—The Columbus & Buckeye Lake St. Electric Ry. Co. was granted a franchise by the county commissioners, Jan. 19, to build a single track electric railway from Hebron to Newark, along the east side of the Newark and Hebron Road.

SANDUSKY, O.—The Sandusky, Norwalk & Toledo Ry. Co. was incorporated, Jan. 24, with a capital stock of $100,000, to construct an electric line from Sandusky to Toledo, via Norwalk. The incorporators are: Clark Rude, W. W. Graham, A. J. Stoll, Henry B. Fowler and W. E. Guerin, Jr.

TOLEDO, O.—The Toledo & Ottawa Beach Ry. Co. was incorporated, Jan. 24, with a capital stock of $100,000. It is proposed to build a steam or electric line from this city to the beach on the lake shore, just across the state line. The incorporators are: J. Kingduffy, C. M. Spitzer, A. L. Spitzer, J. H. Doyle and C. T. Lewis.

CHICAGO, ILL.—The Chicago & Des Plaines Valley Electric Ry. Co. was incorporated in Illinois, Jan. 26, with a capital stock of $1,000,000. It is proposed to construct and operate an electric railway from Wheeling, Cook county, to Lemont, in Cook county. The incorporators and first board of directors are: Henry G. Forman, Clayton E. Crafts and Charles D. Evans, of Chicago; Philip H. Gray and William M. Hulbert, of Maywood.

CICERO, ILL.—The trustees of this town voted, Jan. 22, to give the Lake St. Elevated R. R. the right to extend its line through Austin and Oak Park to Harlem Ave. ——The franchise of the Cicero & Proviso St. Ry. Co. was also extended for 50 years.

LA GRANGE, ILL.—The La Grange, Warrenville & Fox River Electric Ry. Co. was incorporated at Springfield, Ill., Jan. 28, with a capital stock of $100,000. It is proposed to construct and operate an electric railway from La Grange Park, in Cook county, westerly through Fullersburg and Warrenville, in Dupage county, to the Fox River, in Kane county, with necessary branches, switches, turnouts, etc. The company is authorized to construct branches to Western Springs, Hinsdale, Lombard, Downer's Grove, Glen Ellyn, Naperville, Wheaton, Bloomingdale, Roselle and West Chicago and to Batavia. The incorporators are: Geo. W. Waite, A. C. Allen, M. C. Covell, A. H. Kerman, Frederick Paulsen, J. W. Krueger and Edward S. Ely, of La Grange; James M. Vallette, B. B. Boecker, I. N. Murray, Willard Scott, George Remps, C. L. Schwartz, of Naperville, Ill.; and others.

WAUPAUCA, WIS.—Paul H. Sanborn, Waukegon, Ill., informs us that most of the right of way has been obtained for the proposed electric railway from Waupauca to the Wisconsin Veteran's Home, 5 miles distant. No surveys have yet been made. Contracts will be let as soon as $50,000 of 5% bonds are disposed of. Robert D. Wynn is also interested in the project.

MILWAUKEE, WIS.—It is reported that the Citizens' Traction Co., represented by A. C. Frost, of Chicago, Ill., has made a proposition to give a $50,000 bond that it will build an electric railway in this city provided that a franchise be granted it.

LITTLE ROCK, ARK.—Maxwell Coffin, Little Rock, informs us that the survey has been made and the right of way obtained for the proposed electric railway from this city to Fort Logan. Capital for construction has been secured and it is expected to let the contracts at once.

SAN FRANCISCO, CAL.—It is reported that the Market St. R. R. Co. will soon convert the old steam road from Golden Gate Park to Ocean Beach into an electric line. Also that the Ellis St. line will be continued to Frederick St. and along that street to H St.

PETERSBOROUGH, ONT.—The construction of an electric railway from this place to Lakefield and Chemonz is now being considered. D. Starr, Pres. Cornwall Electric Ry. Co., Board of Trade Bldg., Montreal, is said to be interested.

ELECTRIC LIGHT AND POWER.

BALDWINSVILLE, MASS.—E. L. Thompson writes us that nothing has been done as yet in regard to the proposed electric lighting of this place, noted in our issue of last week. The question is only being discussed.

FRAMINGHAM, MASS.—The board of trade is considering estimates for a plant, according to reports.

SPRINGFIELD, MASS.—Local papers state that the street lighting commission will consider the question of a municipal plant. The contract with the light company expires in the spring of 1899.

WINTHROP, MASS.—Alfred Tewksbury, of the committee, writes us that the committee has been appointed to inquire into the advisability of the town owning a plant for street and commercial lighting. No definite action is likely to be taken at present. A paper states that the report will be submitted at the March town meeting. C. P. Pike and Chas. W. Howard are on the committee.

ALBANY, N. Y.—Geo. I. Bailey, Supt. Water Works, informs our correspondent that an electrical plant will be established at the central station of the city waterworks to furnish power to pumps to be located on the flats north of the city, for the purpose of pumping water from the river to the filter beds. Plans are being prepared and with the specifications, will be ready about April 1.

CANISTEO, N. Y.—The question of building a plant is being considered. John Keeler, Village Trustee.

CENTRAL ISLIP (L. I.), N. Y.—Bids are asked until 4.30 p. m., Feb. 3, for furnishing the materials and performing the labor required and necessary for the electric wiring and fixtures for Cottages Nos. 4, 5 and 6, of Group D, at Central Islip, N. Y., and for furnishing the materials and performing the labor required and necessary for the consolidation of the electric lighting plants at the new power house at Ward's Island, N. Y., for the Manhattan State Hospital. Henry E. Howland, Pres. Bd. Mgrs., 1 Madison Ave., New York.

HONEOYE FALLS, N. Y.—H. A. Clark, Corning, N. Y.; J. F. Witmer, C. E., 705 Ellicott Square, Buffalo, N. Y., and F. E. Schoonmaker, Rochester, N. Y., are reported as interested in the proposed plant, noted in our issue of last week.

LOCKPORT, N. Y.—Assemblyman Vroman has introduced a bill authorizing this city to issue $50,000 in bonds for a municipal plant. Chas. H. Cornes, Cy. Engr.

MIDDLEPORT, N. Y.—The subject of lighting the village by electricity will be decided at the next annual election.

TONAWANDA, N. Y.—Work will be begun at once on the proposed tranformer station of the Tonawanda Power & Conduit Co. The power will be furnished mainly to manufacturing plants.

WEST TROY, N. Y.—The electric light commission last week recommended that $16,000 in addition to the fixed appropriation of $8,000 be placed in the tax budget, for enlarging and improving the electric light plant. This will include the lighting of the public buildings with an incandescent system. Mayor Day may be addressed.

ALLEGHENY, PA.—Bids are asked by the board of inspectors of the Western Penitentiary, until Feb. 17, for furnishing and erecting a plant, as stated in our advertising columns. Local papers state that there are over 1,100 cells at the Western Penitentiary, and it is supposed that it will take about 1,400 lights to light the institution and the warden's residence. This does not include the arc lights which will be placed in the yard and rotunda of the prison. Davis B. Oliver, Chn., and J. R. Reed are on the board.

SHAMOKIN, PA.—Bids were asked until Feb. 1 for furnishing 35 arc lights of 2,000 c. p., for a term of one or five years. Bond, $5,000. M. C. Farrow, Ch. Burgess; Dr. F. A. Clark, Chn. Com.

LEWES, DEL.—It is stated that the board of trade has voted to ask the legislature to grant the city permission to issue $40,000 in bonds for a plant, water-works, etc. Dr. H. R. Burton, Dr. D. L. Mustard and E. J. Morris are interested. Dr. Burton writes us that nothing definite has been done as yet.

ELLICOTT CITY, MD.—Press reports state as follows: The council and the Catonsville Ice, Light & Power Co., of Baltimore county, are considering the question of electric lights for this city. Should the proposition be carried into effect it is the intention of the company to establish a plant near Ellicott City, at a cost of $40,000, which may also be utilized in giving the town an additional water supply. The Catonsville company in its proposition stipulates that 500 lights must first be subscribed for in order to complete the contract. It is stated that the required number can be obtained, and that the council is disposed to favor the proposition.

ALEXANDRIA, VA.—The city is considering the addition to its plant of an incandescent machine. It is stated that as now situated such light cannot be obtained in the town. There are several propositions on foot by outside concerns to lease or buy the plant, but the citizens, it is reported, generally favor making such improvements at the works as will bring a revenue to the city.

NEWPORT, VA.—Local papers state that the Peninsular Electric Light & Power Co. has placed an order with the General Electric Co., New York, for an arc light dynamo. There will also be added two boilers of 150 HP. each, and an improved Green engine of 100 HP. This will necessitate the building of another brick smoke-stack.

DALTON, GA.—The council is reported as considering the question of an electric light plant in place of its gas plant. Population (1890), 3,050.

FERNANDINA, FLA.—Geo. S. Roux, Cy. Clk., informs us that the Savannah Supply & Construction Co. has been awarded a contract for installing a 125-HP. engine, two 80-HP. boilers, a 1,000 16-c. p. alternating incandescent dynamo; also 16 and 1,200-c. p. street lights to be added to the 19 now operated by the old 50-HP. engine and 50 arc light dynamo.

McCOMB, MISS.—Plans and specifications will be prepared by Sanders & Porter, Louisville, Ky., for the proposed electric light plant, water-works, sewerage system, etc., for this place.

WASHINGTON, LA.—Bids are asked until Feb. 8 for constructing a plant. Population (1890), 1,100. Engr., Robt. R. Zell, Godchaux Bldg., New Orleans, La.

DICKSON, TENN.—Capt. John Adams is reported as about to build a small light plant.

DOVER, TENN.—A. M. Tippett, P. M., is reported as interested in a proposed plant for this town.

MARTIN, TENN.—Chas. A. Cashon, Recdr., writes us that the legislature, now in session, has granted this city the right to issue $25,000 in bonds. They have been con-

ditionally sold to F. R. Fulton & Co., Portage, Wis., at a premium of $1,000; provided that the ordinance carries at the election held for that purpose. J. E. Kennedy, Mayor.

CLINTON, KY.—Sanders & Porter, Louisville, Ky., and Brookhaven, Miss., are preparing plans for lighting this place and for water-works.

MORGANFIELD, KY.—It is reported that the plant in this place will be extended. Population (1890), 1,100.

WEST COVINGTON, KY.—The council has voted to ask for bids for the purchase of a franchise for lighting this place, according to reports. Estimated cost, $10,000.

HARTWELL, O.—The committee has voted in favor of granting an exclusive light franchise, according to reports.

HYDE PARK, O.—It is stated that J. W. Davy, of Hyde Park, has sued, as a taxpayer, to enjoin the council from entering into a 15-year contract with the Hyde Park Electric Light Co. to furnish light to the village. He claims that such contract would be an abuse of corporate power and illegal, because no competitive bidding was had.

NEWARK, O.—The city clerk is reported to have been directed to ask for bids for constructing an addition to the light plant.

PEEBLES, O.—The legislature will probably soon be asked to give this place authority to hold an election to vote on the question of issuing $20,000 in bonds for a plant and water-works. Mayor J. R. B. Kessler writes us that the bill will soon be before the legislature.

WESTON, O.—J. A. Holmes, Mayor, writes us that an informal vote was recently taken to ascertain the wishes of the people on the question of making a contract with parties now operating the plant, to light the place with 65 c. p. lights. The measure carried.

ROCKVILLE, IND.—The "Republican" is urging the council to build a plant.

CHARLOTTE, MICH.—The construction of a municipal plant is again being considered. A year ago this place voted against the project. Population (1890), 3,900. Mayor Bennett may be addressed.

DAVISON, MICH.—E. A. Boss, of Clio, Mich., is reported as interested in the proposed plant.

GRASSLAKE, MICH.—At the spring election the question of constructing a plant, it is reported, will be voted upon.

LANSING, MICH.—Local papers state that plans are being prepared for extending the plant and also for increasing its capacity. Light Commissioners Stahl, Thoman and Donovan may be addressed.

WILLIAMSBURG, IA.—The council is reported as considering the question of constructing a plant.

OLIVIA, MINN.—It is stated that E. Wille, Granite Falls, Minn., is interested in a proposed plant for this place.

NORTHWOOD, N. DAK.—The question of constructing a plant is being considered by local parties, according to reports.

WALHALLA, N. DAK.—John Mager is said to have made arrangements for a plant for this place.

HITCHCOCK, S. DAK.—F. B. Gray writes us that up to Jan. 25 the contract for the proposed plant had not been awarded.

KANSAS CITY, KAN.—John M. Lang, G. W. Kierstead and Col. D. A. McKibben, Leavenworth, Kan., are interested in a proposed plant in this city, according to reports.

ST. LOUIS, MO.—Local papers state that the Imperial Electric Light, Heat & Power Co. is removing the buildings at 10th and St. Charles Sts., preparatory to erecting its new power house.

WINNSBORO, TEX.—The W. G. Ragley Lumber Co. proposes to construct a plant, according to reports.

SEATTLE, WASH.—Press reports state that Thos. T. Johnston, Consult. Engr., Security Building, Chicago, Ill., is completing plans for the proposed power plant at Snoqualme Falls; estimated cost, $500,000. For further information see our issues of Dec. 23 and 30. Chas. H. Baker, Pres., Seattle, and Wm. T. Baker, ex-Pres. Chicago Bd. of Trade, Chicago, Ill., are interested. Wm. T. Baker writes us that probably only the electrical work will be done by contract.

VENTURA, CAL.—The plant of the Ventura Land & Power Co. was destroyed Jan. 20, causing a reported loss of $15,000. Mr. Christian, Mgr., may be addressed.

WOODLAND, CAL.—Trustees C. W. Thomas and J. H. King presented an application Jan. 18, on behalf of F. W. Page, who is interested in the proposed electric power plant, for a franchise to construct and maintain a plant here, and to transmit power to this city.

ESSEX, ONT.—It is reported that the council is making arrangements to construct a municipal plant. This item was noted last week under Essex, Mich.

NEW COMPANIES.—Chestertown Electric Light Co., Chestertown, Md.; $15,000, with full amount paid in; to operate in Kent county, Md.; M. A. Hoffman; A. H. Tracy, Des. Engr.; J. King Wright, Secy.

Citizens' Electric Light Co., Winchester, Ind.; $20,000; Pres., Theodore Shockney; Secy. and Treas., Joseph T. Gist; Gen. Mgr., Charles M. Reed.

Snoqualmie Falls Power Co., Seattle, Wash.; $500,000; Chas. H. Baker, Seattle, Wash.; Wm. T. Baker, Bd. of Trade, Chicago. Further information in regard to this project is given above.

Citizens' Electric Light Co., Lewistown, Mont.; $10,000; D. M. Crowley, C. F. Little, F. E. Wright, John Warr, I. M. Holensack, G. W. Cook, Sam Phillips, Lewistown.

Shippensburg Electric Light Co., Shippensburg, Pa.; J. L. Barnes, Pres.; W. J. Coffey, Treas.; James Fleming, Secy. Reorganization of old company.

Washington County Electric Power Co., Hagerstown, Md.; to build a plant in the spring; Supt. and Mgr., W. C. Hepperle.

People's Electric Light, Heat & Power Co., Ocean City, N. J.; $50,000, with $2,000 paid in; George Pfeiffer, Jr., Contractor; George Barrett, J. Rufus Eastlock, Camden, N. J.

BRIDGES.

BEDFORD, MASS.—It is reported that a contract at $3,097 has been awarded by the Metropolitan Water Board, Boston, to the Pittsburg Bridge Co., Pittsburg, Pa., for constructing a bridge on the pipe line over the Boston & Maine R. R., at College Ave. The other bids were: King Bridge Co., Cleveland, $3,190; Berlin Iron Bridge Co., East Berlin, Conn., $3,275; Boston Bridge Works, $3,310; Marquand & Stearns, Boston, $3,450; N. E. Structural Co., Boston, $3,480; New Jersey Steel & Iron Co., Trenton, $3,525.

WOONSOCKET, R. I.—Bids are asked until Feb. 14 for constructing a steel bridge on Wood Ave., over the Peters River, as stated in our advertising columns. Frank H. Mills, Cy. Engr.; Jonathan Battye, Chn. Com.

BRIGHTON, N. Y.—Reports state that a bill has been introduced in the legislature by Mr. Perkins asking for an appropriation of $25,000 for the construction of a wrought-iron lift bridge over the Erie Canal at this place.

BUFFALO, N. Y.—The board of aldermen has recommended the construction of a new bridge to be built to replace the old structure at Michigan St. over the ship canal.

LOWVILLE, N. Y.—A bill has been introduced in the legislature by A. L. Clark for an appropriation of $10,000 for the construction of a bridge over Black River at Pratt's Landing, between Greaig and Turin.

NEW YORK, N. Y.—Bids are asked by the East River bridge commission, 49 Chambers St., until Feb. 28 for furnishing the materials and for constructing the steel towers and end spans of the new East River bridge, as stated in our advertising columns. Lewis Nixon, Pres.; Smith E. Lane, Secy.

NORTHUMBERLAND, N. Y.—The people of Fort Miller are desirous to have a bridge across the Hudson River, to connect with Northumberland. The land for the approaches and the right of way has been offered, according to reports.

ROCHESTER, N. Y.—Bids are asked until Feb. 8 for constructing a lift bridge over the Erie Canal at Fitzhugh St. Geo. W. Aldridge, Supt. Pub. Wks., Albany.

WATERTOWN, N. Y.—It is reported that the question of removing the old bridge and constructing a $1,900 stone arch bridge or an iron structure at a cost of $1,600 across Mill Creek will be voted on at the next election.

MOSGROVE, PA.—Press reports state that the Allegheny & Western Ry. Co. will construct a bridge over the Allegheny River with a 400 ft. channel span. Maj. Chas. F. Powell, U. S. Engr., Pittsburg, Pa., has prepared the plans.

PITTSBURG, PA.—A project is being considered by the Allegheny sub-committee on surveys for the construction of a bridge from 800 to 1,000 ft. long, at an estimated cost of from $60,000 to $70,000, from Shady Ave. to Geyer Ave., across Wood's Run.

SNYDERTOWN, PA.—P. C. Klase informs us that the proposed bridges will not be built at present, as mentioned in our last issue.

WASHINGTON, D. C.—The district commissioners have asked Congress for an appropriation of $285,000 to construct the foundations, piers and abutments up to about the beginning of the arch masonry of the proposed Connecticut Ave. viaduct over Rock Creek, as illustrated in our last issue. They further recommend the employment of Geo. S. Morison, 35 Wall St., New York, and the erection of the bridge in concrete at a cost of $675,000.

ATLANTA, GA.—M. P. Camp, Chn. Com., 20 Wall St., writes us that it has been definitely decided that a viaduct will be constructed over the tracks at Mitchell St., to cost $85,000. R. M. Clayton, Cy. Engr.

BUCYRUS, O.—We are informed that the contract has been let for constructing a steel bridge at North Sandusky Ave., as noted in our issue of Jan. 27. It will be 42 ft. long on stone foundation, with a capacity of 15 tons; estimated cost, $3,000. L. H. Battfeld, County Audr.

ALBION, MICH.—It is reported that the contract for the new steel truss bridge in the south part of the city was awarded, Jan. 26, to the Wrought Iron Bridge Co., Canton, O., at $5,000.

LANSING, MICH.—Reports state that the court has ordered the county bridge commission to repair the Third St. approach in West Bay City, at a cost of $35,000.

SAGINAW, MICH.—H. E. Terry, Cy. Engr., informs us that the board of supervisors has ordered a new swing span built for the bridge at Bristol St., which is owned by the Central Bridge Co., not later than May 1, instead of plans for a whole new structure, as stated in our last issue. W. J. Hart, Mgr., Saginaw.

ADELINE, ILL.—The following bids were received Jan. 25 for constructing a 66 by 16-ft. steel span bridge on stone foundations, the latter having been built:

Joliet Bridge & Iron Co., Joliet, Ill.	$681
Massillon Bridge Co., Massillon, O.	703
Western Bridge Co., Chicago, Ill.	715
Wisconsin Bridge & Iron Co., Milwaukee, Wis.	690
Wrought Iron Bridge Co., Canton, O.	725
King Bridge Co., Cleveland, O.	692
Bellefontaine Bridge Co., Bellefontaine, O.	698
Clinton Bridge & Iron Works, Clinton, Ia. (accepted).	615

SANDSTONE, MINN.—Press reports state that a contract was awarded to Hewitt & Co., Jan. 20, at $6,500, to construct a 200-ft. steel span bridge over the Kettle River at this place.

STAPLES, MINN.—W. J. Lewis, Staples, writes us that a bridge will be constructed across the Crow Wing River at this place, to be 300 ft. long and 20 ft. wide, with stone foundation; estimated cost, $2,000. The plans and specifications up to Jan. 24 had not been submitted. O. T. Wilson, Ellis, Minn., may be addressed.

MANKATO, MINN.—We are informed that bids were asked until Feb. 2 for constructing a steel bridge 36 to 45-ft. span and a 16-ft. roadway on steel tubular foundations. P. A. Gunder, County Audr.

DULUTH, MINN.—The Keystone Bridge Co., Pittsburg, Pa., has a contract for constructing a steel bridge over the Whiteface River for the Duluth, Missabe & Northern R. R., according to reports.

DES MOINES, IA.—Bids are asked by the county auditor until Feb. 10 for the construction of bridges in districts 3, 4 and 5 during 1898.

VERMILLION, S. DAK.—Bids are asked until Feb. 14 for constructing a 96-ft. bent bridge over the Slough in Meckling township, according to reports. Fred. Heglin, County Audr.

GREENWOOD, MO.—Bids are asked until Feb. 7 for constructing a 50-ft. steel bridge over the east fork of Big Creek, 1½ miles east of this place. Thos. F. Callahan, County Surv. and Bridge Comr., Kansas City, Mo.

VANCOUVER, WASH.—Bids are asked by the county commissioners until Feb. 11 for constructing the Conrad Auer bridge, according to reports. A. J. Cook, County Audr.

BUILDINGS.

KENNEBUNKPORT, ME.—The Ocean Surf House, a large summer hotel at this place, was burned, Jan. 30, causing a reported loss of $75,000; insurance, $30,000. Gibson & Sherrell, of Haverhill, Mass., are the proprietors.

CAMBRIDGE, MASS.—Reports state that Wm. G. Macleod, of this city, contemplates the erection of two stone and brick 6-story apartment houses on Massachusetts Ave., to cost $150,000. Work to begin about March 1.——Plans are being considered for a 3-story brick building to be erected in this place for the Home for Aged Men and Women; estimated cost, $60,000.

BOSTON, MASS.—W. L. Morrison, 24 Warren St., Roxbury, is said to have been awarded the contract for erecting a 4-story brick and stone apartment building at Massachusetts Ave. and Norway St., for E. A. Bangs, 12 Pemberton Square, and W. F. Beal, 40 State St.; reported cost, $125,000.

BINGHAMTON, N. Y.—Bids are asked until Feb. 12 for the electric wiring, plumbing and steam heating and ventilation for the laundry building for the Binghamton State Hospital. I. G. Perry, Arch., Albany, N. Y.; J. B. Stanbrough, Pres. Bd. Mgrs.

BUFFALO, N. Y.—The New York Central & Hudson River R. R. Co. will build a brick and iron freight storehouse on Erie St., to cost about $25,000——R. Dunbar & Sons are having plans prepared for a steel frame elevator to be built on the site of the Sturges elevator, which was recently burned. It will have a capacity of 1,000,000 bushels, and Niagara power will be used. The elevator will be the property of the Buffalo Elevator Association——Plans have been prepared for a Medina stone church building for the Church of Ste. Theresa, to cost $30,000; Arch., W. Post.

GENEVA, N. Y.—Emig & Hatmaker, of Geneva, were the lowest bidders on the plumbing and drainage work for the New York Experimental Station at this place, at $3,475. A. C. Chase, Chn. Comrs.

TONAWANDA, N. Y.—Plans have been prepared for a 4-story brick block to be built for the Armitage & Herschell Co., at a cost of $75,000. Arch., W. W. Johnson, City Bank Bldg., Buffalo, N. Y.

PORT JERVIS, N. Y.—An election will be held at this place, Feb. 10, to consider the advisability of appropriating $36,500 for the erection of two new school buildings.

NEW YORK, N.Y.—Boring & Tilton, 57 Broadway, have been chosen as architects for the reconstruction of the buildings of the Ellis Island Immigrant station, New York Harbor. The main building will be of brick and stone, 62 ft. high, 300 × 166 ft., and will cost about $600,000.——Plans have been filed by Joseph Cirrito, 20 West 65th St., for a 7-story brick flat building, on 101st St., east of Riverside Drive, to cost $90,000. Archs., Neville & Bagge, 217 West 125th St.; by McKinney & Von Schoen, 1461 Broadway, for an 8-story brick store and loft building at 80 and 82 4th Ave., to cost $130,000. Arch., W. J. Dilthey, Lincoln Bldg.; by Emma H. Crocker, for a 5-story brick and stone dwelling at 64th St. and 5th Ave., to cost $100,000. Archs., Bute & Bacon, 111 5th Ave.; by Geo. H. Jackson, 210 West 17th St., for four 5-story brick flat and store buildings at 125th St. and the Boulevard, to cost $117,000. Archs., Neville & Bagge, 217 West 125th St.; by Wm. G. Webber, 52 West 100th St., for four 5-story brick flat and store buildings at 101st St. and 5th Ave., to cost $100,000. Arch., G. Frederick Pelham, 503 5th Ave.; by J. Fleischmann & Son, 2 East 116th St., for three 5-story brick flat buildings on 112th St., near 3d Ave., to cost $58,000. Arch., Charles Stegmayer, 306 East 82d St.; by the Hemingway Estate, Boston, Mass., for a 15-story brick office building at 291 and 293 Broadway, to cost $400,000. Archs., Clinton & Russell, 32 Nassau St.; by the Baron de Hirsch Fund, for a 4-story brick school building on 64th St., east of 3d Ave., to cost $80,000. Archs., Freidlander & Dillon, 26 West 22d St.; by Jas. W. Taylor, 33 West 90th St., for two 6-story and one 7-story brick flat and store buildings on 104th St. and the Boulevard, to cost $205,000. Arch., G. Fred. Pelham, 503 5th Ave.; by D. Kendall, for four 5-story brick flat and store buildings on Park Ave., near 116th St., to cost $80,000. Archs., Neville & Bagge, 217 West 125th St.; by Thos. K. Moore, 138 West 111th St., for three 5-story brick flat buildings on 111th St., near 7th Ave., to cost $120,000. Arch., A. A. Millner, 81 East 125th St.

NEW YORK, N. Y.—The following bids were received by the board of education, Jan. 31, for building addition to Public School 98:

H. Probst, 1180 Broadway	$61,337
Jennings & Welstead, 1162 Broadway	66,698
Collier-Weeks Co., 163 West 23d St.	69,000
M. F. Cusack, 233 Grand St.	70,349
Mapes-Reeve Construction Co., 150 Nassau St.	70,643
P. Gallagher, 156 5th Ave.	70,789
McEntee & O'Brien, foot of East 124th St.	73,027
Christopher Nally Co., 102 West 81st St.	74,300
Luke A. Burke, 401 West 59th St.	74,400

——Jennings & Welstead, 1762 Broadway, were lowest bidders, Jan. 31 for improving lots of Public School 3, for the board of education, at $13,500.——The lowest bidder for improving lots of Public School 113, Jan. 31, was John Furey, 1684 2d Ave., at $6,700.

NEW YORK, N. Y.—The following bids were received by the supervising architect, Washington, D. C., Jan. 31, for building the approaches to the U. S. Appraiser's warehouse in this city:

		Time.
Jos. H. Cutley, Jersey City, N. J.	$17,361	45 days
Booth Bros. & Hurricane Isle Granite Co.*	11,990	Mar. 20
Crescent Construction Co., New York	14,292	30 days
M. J. Dady, Brooklyn, N. Y.	13,778	Mar. 20
J. W. Cody & Bro., New York	15,875	30 days
G. W. Corbett, Washington, D. C.	12,395	Mar. 20
W. H. Ellis, New York	14,355	Mar. 20

*New York.

CRANFORD, N. J.—Bids are asked by the building committee of the board of education of the township of Cranford, until Feb. 5, for the erection of two brick school buildings. Archs., Ackermann & Ross, 156 5th Ave., New York.

EAST ORANGE, N. J.—Reports state that the East Orange township committee has decided to erect a town hall on Main St., between Winans and Walnut Sts., after plans made two years ago by Boring & Tilton, 57 Broadway, New York; estimated cost, $25,000.

PHILADELPHIA, PA.—Bids are being received by Wm. G. Price, Jr., 14 South Broad St., for the erection of twenty-four 2-story brick and stone dwellings in West Philadelphia, after plans made by Arnold H. Moses, 419 Walnut St.; reported cost, $100,000.——Reports state that Kohl & Bros., Masonic Temple Bldg., are receiving bids for the erection of eighteen 3-story brick and stone dwellings, to cost about $150,000. Arch., David Boyd, Harrison Bldg.

PHILADELPHIA, PA.—Bids are asked until Feb. 7 for the installing of a steam heating system in Independence Hall; also for the improvement of Wharton Square. Frank M. Riter, Director Dept. Pub. Safety.

PITTSBURG, PA.—It is reported that a 4-story brick building will be erected at 6th St. and Liberty Ave. by the estate of Martha McD. Smith, at a cost of about $100,000. Plans will probably be prepared by Jas. T. Steen, 36 6th St.

WASHINGTON, PA.—Plans have been accepted by the Washington county commissioners for the new court house, to be built of granite or stone, at a cost of about $425,000. Arch., F. J. Osterling, Telephone Bldg., Pittsburg, Pa.

WILKINSBURG, PA.—Bids are asked by the board of school directors, until Feb. 10, for the erection of additions to the 3d ward school building at Pitt and McNair Sts.; deposit, $1,000. Arch., E. M. Butz & Co., Park Bldg., Pittsburg, Pa.; Secy. Bd., R. M. Ewing, Park Bldg., Pittsburg.

BALTIMORE, MD.—The following bids have been received by Benj. B. Owens, Inspector of Bldgs., for the installation of ventilating fans in the English-German School No. 1: Southern Electric Co., Lexington and North Sts., $1,575; McCay & Howard Engineering Co., 106 East German St. (accepted), $1,219.

WASHINGTON, D. C.—H. T. Gregory has been awarded the contract for furnishing the heating and ventilating apparatus for the new school building to be erected on 6th St., S. E., between B and C Sts., at $2,590.——Mr. Young, of Pennsylvania, has introduced into the House a bill authorizing the purchase of 124,263 sq. ft. on B St., between 1st and 2d Sts., N. W., and the erection thereon, at a cost not exceeding $600,000, of a government building to be used by the census office, Indian office, civil service commission, a bureau of archives and other government bureaus.——Preliminary plans have been prepared for two new buildings for the American University on Massachusetts Ave., extended. One of these designs, by W. M. Poindexter, 806 17th St., N. W., is for the College of Languages; the other, by Henry Ives Cobb, 100 Washington St., Chicago, is for the College of Government. It is probable that one of these buildings will be begun next fall.

HAMPTON, VA.—Plans are asked by the supervisors of the county of Elizabeth City, until Feb. 15, for a new 2-story brick jail building, the cost of building complete not to exceed $8,000. H. H. Holt, Deputy Clk.

DECATUR, GA.—The following bids were received by Ordinary Ragsdale, Jan. 26, for the erection of the new court house for De Kalb county: Gude & Walker, $58,700; William Bensel & Co., $57,700; Nicholas Ittner, $57,646; W. W. McAfee, $57,345; H. P. Helfner, $49,888, and George E. Murphy, $42,248. The amount intended to be expended was only $25,000.

KNOXVILLE, TENN.—Plans have been accepted by the trustees of the Eastern Hospital for the Insane of Tennessee for a $25,000 brick and stone building, to accommodate 100 inmates. Archs, Adams & Bearden, Chattanooga, Tenn.; Supt., Dr. Michael Campbell.

LEXINGTON, KY.—The fiscal court of Fayette county has decided to build a new court house in this city, at a cost of about $150,000.

BARNESVILLE, O.—Bids are asked until Feb. 21 for erecting a public building. H. E. Dement, Village Clk.

GIBSONBURG, O.—Bids are asked until Feb. 19 for erecting a 3-story brick building for Gibsonburg Lodge of I. O. O. F. Arch., S. H. Shively, Fremont, O.; Chn. Com., A. E. Ferguson.

RICHMOND, IND.—We are informed that the Richmond Loan & Savings Association will erect a new office and apartment building. Pres., T. R. Woodhurst.——Plans are being prepared for an Odd Fellows hall by W. S. Kaufman, 32 Kelly-Hutchinson Block.

CORUNNA, MICH.—An election will be held here on April 4, according to reports, to vote on the proposition of erecting a new court house, at a cost of about $40,000.

BRANDON, MICH.—Bids are asked until April 2 for the erection of a 4-roomed brick school building. E. Strassburgh, 78 East Dearborn St., St. Paul, Minn.; J. J. Levzinger, Jr., Clk. Bd. Trustees.

CHICAGO, ILL.—Bids are asked by the directors of the Chicago Public Library, until Feb. 10, for equipments and apparatus for oil receiving, storing, feeding, returning and filtering in connection with the engine plant in the building for the Chicago Public Library in Dearborn Park; also for covering of boilers, exhaust feed water heater, certain air ducts and waste and soil pipes in the same building. Archs., Shepley, Rutan & Coolidge, Old Colony Bldg.; Secy., W. B. Wickersham.

WEST BEND, WIS.—Bids are asked until Feb. 15 for the erection of a 2-story brick county insane asylum building, to cost about $35,000. Archs., John Charles, of Menominee, Wis., and Ferry & Clas, 419 Broadway, Milwaukee, Wis.

MINNEAPOLIS, MINN.—Plans have been prepared for the remodeling of the Grand Opera House into an office building. It will be seven stories high, and will contain all modern conveniences; estimated cost, $125,000. Arch., Frederick Kees; Mgr., J. F. Conklin.

DE SMET, S. DAK.—The following bids were received Jan. 18 for constructing a court house and jail. Arch., W. L. Dow, Sioux Falls, S. Dak.: A. C. Ochs, Springfield, Minn., $14,400; J. F. Wright, De Smet, $14,560; M. E. Bush, Des Moines, Ia. (accepted), $14,800; J. M. Randolph, Sioux Falls, S. Dak., $15,550; E. Miller, Le Mars, Ia., $16,800.

ANADARKO, OKLA.—Bids are asked, until Feb. 28, for erecting a stone mess hall at the Fort Sill Indian boarding school; one brick dormitory and one frame mess hall at the Riverside school, and one stone dormitory, one stone mess hall and one frame building at the Rainy Mountain school. Capt. Frank D. Baldwin, Acting U. S. Indian Agt., Anadarko.

LITTLE ROCK, ARK.—The following bids were received Jan. 27 by the supervising architect, Washington, D. C., for an addition to the low temperature, hot water heating and ventilating apparatus for the new extension of the U. S. Court house and Post Office Building in this city:

		Time.
Samuel I. Pope Co., Chicago., Ill.	$7,777	60 days
Thomas A. Smith, Chicago, Ill.	7,039	35 "
Little Rock Plumbing Co., Little Rock	11,740	40 "
Chas. B. Kruse Heating Co., Milwaukee	7,399	60 "
Chafer & Becker, Cleveland, O.	7,139	60 "
Arkansas Pump & Pipe Co., Little Rock	9,797	50 "

DENVER, COLO.—The following bids were received Jan. 28 by the supervising architect, Washington, D. C., for the foundation, superstructure and roof covering of the U. S. Mint building at Denver:

	Gray granite.	Red sandstone.	Time.
C. J. Smith, Denver	$314,852	$254,742	16 mos.
Geo. W. Corbett, Washington	279,000	241,000	16 "
G. W. Atkinson & Son	245,000	281,800	16 "
Amberg Granite Co., Chicago	307,497	.....	14 "
Hennessy & Cox, St. Paul	278,843	225,586	15 "
H. Ferge, Milwaukee, Wis	223,561	205,561	16 "
C. W. Hubbard & Co., Omaha	192,500	.....	16 "
C. A. Moses, Chicago, Ill.	269,995	233,995	16 "
Giddis & Surle Stone Co, Denver	249,750	205,000	16 "
Foster & Smith, Minneapolis	268,000	217,000	16 "
Greenlee & Son, Denver	265,000	217,327	16 "
McGilroay Stone Co., Denver	261,300	220,000	15 "
L. L. Leach & Son, Chicago	263,873	219,800	16 "
Jno. A. McIntyre, Denver	247,874	202,872	16 "
Frank Anderson, Denver	270,000	229,000	14 "

[Colorado Springs, Colo.

NEW BRAUNFELS, TEX.—Bids are asked until Feb. 12 for erecting a 3-story fire-proof court house for Comal county; deposit, $1,500. Arch., J. Riely Gordon, Smith Block, San Antonio, Tex.

SAN ANTONIO, TEX.—Bids are asked by the managers of the Southwestern Insane Asylum, until Feb. 7, for erecting two additional wings and an infirmary for this asylum. Arch., J. Riely Gordon, San Antonio; Pres. Bd., B. F. McNulty.

WATER-WORKS.

KINGSFIELD, ME.—A new plant will be built this spring by the Kingsfield Water-Works Co. Engr., Chas. N. Taylor, Natick, Mass.

FALMOUTH, MASS.—John S. Bleakie, Robt. Bleakie, Wm. H. Hewtins and Geo. E. Dean have applied for the incorporation of the Falmouth Water Co.

WEST SPRINGFIELD, MASS.—N. T. Smith Chn. Com., writes us that a taxpayers' meeting was held Jan. 23 to consider the question of increasing the water supply. Action was postponed, the committee to report April 4.

CROMWELL, CONN.—Chas. N. Taylor, Natick, Mass., is making surveys and plans for the proposed works in this place for F. H. C. Reynolds & Co., 7 Exchange Place, Boston. This company proposes to build works in other New England towns this season.

CHARLOTTE, N. Y.—The question of works will be considered at the town meeting in March, according to reports. P. M. Schwartz, Village Clk.

FULTON, N. Y.—The citizens are reported to have voted unanimously in favor of municipal works. Wm. R. Hill, Ch. Engr. Water Bd., Syracuse, N. Y., has submitted a report and estimates for the proposed works to cost about $115,000. F. G. Spencer, Chn. Com.

MIDDLETOWN, N. Y.—W. D. Stratton, Pres. Bd. Water Comrs., writes us that the new reservoir will probably cost about $175,000. About 18,000 ft. of 20-in. cast-iron pipe will be used to connect the new reservoir with the old one, which is near the city limits. The matter will be submitted to a vote of the people in the next 60 days.

HALEDON, N. J.—The High Mountain Water Co. has been incorporated to supply water from High Mountain and vicinity. It will build a reservoir for the storage of water and lay pipes first through Haledon, with a view of gradually extending the business. Capital stock, $50,000, with $20,000 paid in. William Buschmann, Sr., William Buschmann, Jr., Haledon, and William H. Belcher, Paterson, N. J., are the incorporators.

WESTWOOD, N. J.—C. S. de Baun, owner of the waterworks, Westwood, is considering the question of selling his franchise.

BRADDOCK, PA.—Bids are asked until Feb. 17 for constructing a 12,000,000-gallon reservoir, as stated in our advertising columns. Supt., W. Howat.

LEWES, DEL.—Dr. H. R. Burton writes us that there is a scheme being considered to bond the town for works and a light plant, but nothing definite has been reached. An effort will be made to get authority from the legislature.

FREDERICK, MD.—Lewis M. Kindorff, Recdr., writes us that no work is likely to be done on the proposed extension for about five months, and perhaps not for a year. Last summer the city received bids for an additional supply, but on account of certain obstacles the work was postponed. In our issue of last week we stated that a bill authorizing the issuance of $35,000 in bonds is before the legislature.

BALTIMORE, MD.—The citizens of Roland Park propose to increase the pressure on the water mains, at a cost of about $2,500. An electric pump, etc., will be installed. Dr. L. J. Turner and Capt. M. B. Sayre may be addressed.

CHARLOTTESVILLE, VA.—It is reported that this place, on Jan. 18, again defeated the proposition to issue $30,000 in bonds for increasing the supply.

NEWPORT NEWS, VA.—Local papers state that the Newport News Light & Water Co. is preparing plans to double the pumping capacity. The work will probably be commenced in a few weeks. This company supplies the water used in this city, Hampton, Phoebus, Soldiers' Home, Chamberlin Hotel and Fort Monroe, piping it a distance of over 60 miles. When the work is completed the plant will have a pumping capacity of 6,000,000 gallons a day. Mayor Walter A. Post, Des. Engr.

GREENVILLE, S. C.—We are informed that Geo. O. Tenney, Spartanburg, S. C., has been awarded the contract by the American Pipe Mfg. Co., 112 North Broad St., Philadelphia, Pa., for constructing a 40,000,000-gallon reservoir near this place, as advertised in Engineering News. Ch. Engr., J. W. Ledoux, Philadelphia.

CLARKSDALE, MISS.—Sanders & Porter, Brookhaven, Miss., are preparing plans for works.

COLUMBUS, MASS.—W. D. Humphries, Mayor, writes us that a bill is before the legislature authorizing this place to issue $70,000 in bonds for extending the works and for a sewerage system. A two-thirds vote of the people is required. If approved plans and specifications will be prepared and bids asked. Population, 6,000.

McCOMB, MISS.—It is reported that plans and specifications for works, a light plant and a sewerage system are being prepared by Sanders & Porter, Columbia Bldg, Louisville, Ky.

SUMMIT, MISS.—It is reported that the council has postponed indefinitely the time of receiving bids for the proposed works, noted in our issue of Jan. 20 as called for Feb. 1.

MARTIN, TENN.—Chas. A. Cashon, Recdr., writes us that the legislature has granted this place the right to issue $25,000 of 20-year 6% bonds for works and a light plant. The bonds have been sold to F. R. Fulton & Co., Portage, Wis. The conditions of the bond sale are that an election be held for purpose. Mayor, J. E. Kennedy.

CLINTON, KY.—Sanders & Porter, Louisville, are preparing plans for works and a light plant.

LOUISVILLE, KY.—Chas. Hermany, Ch. Engr. and Supt. Louisville Water Co., writes us that the report that bids will soon be asked for filters is rather previous. Plans are being prepared for a system of water purification, including an additional pumping station to re-elevate the purified water for distribution.

NORWALK, O.—W. E. Bell, Pres. Water Comrs., writes us that there will be built a stand-pipe, new engine house and a new pump of 3,000,000 gallons capacity. Bids will not be asked until about June 1.

PEEBLES, O.—The legislature will be asked to authorize this town to call an election to vote on the question of issuing $20,000 in bonds for works and a light plant. The water-works will cost $10,000. J. R. B. Kessler, Mayor, writes us that the bill will be before the legislature in a short time.

PRAIRIE DEPOT, O.—An election is reported to have been held Jan. 29 to vote on the question of issuing bonds for works.

SPRINGFIELD, O.—Geo. Cotter, Supt. Water-Works, writes us that it is expected to spend $15,000 on extensions during the summer.

MONROEVILLE, O.—We are informed that the following bids were received Jan. 26 for constructing works. The bids for castings, pipe and pipe laying are given under Contract Prices, as advertised in Engineering News. Engr., Paul Voorhees, Buffalo, N. Y.; Secy., J. P. Henninger.

Valves and Hydrants.

James B. Clow & Sons, Chicago, Ill. $1,26
Ludlow Valve Mfg. Co., Troy, N. Y. ..... (1) 1,13
Michigan Brass & Iron Works, Detroit, Mich. 1,07
R. D. Wood & Co., Philadelphia, Pa. 1,12
Bourbon Copper & Brass Works, Cincinnati, O. 1,20

	Triplex power pump.	Steam pump.
Henry R. Worthington, New York	$1,075	$1,225
Laidlaw-Dunn-Gordon Co., Cincinnati, O.	975	1,150
Stilwell-Bierce & Smith-V. Co., Dayton, O.	782	902
Hughes Steam Pump Co., Cleveland, O.	800	950
The Deming Co., Salem, O.	666	(1) 950
Rumsey & Co., Seneca Falls, N. Y.	(1) 975	
Goulds Mfg. Co., Seneca Falls, N. Y.	548	852

Stand-Pipe.

Marietta Boiler Works, Marietta, O. $4,075
Gem City Boiler Co., Dayton, O. 3,600
Variety Iron Works, Cleveland, O. 3,500
Tippett & Wood (without foundation) 4,400
Rarig Engineering Co., Columbus, O. 3,248
Warren City Boiler Works, Warren, O. 3,500
Standard Boiler & Bridge Works, Bellaire, O. (1) 3,488

Works Complete.

H. D. Shannon & Co., Orrville, O. $13,700
H. Moores Co., Milwaukee, Wis 14,800

(1) Contract awarded.

WINCHESTER, IND.—W. S. Dizzs, Mayor, writes us that the city will vote, Feb. 8, on the question of issuing bonds for works. It will probably carry.

BAY CITY, MICH.—Bids are asked by the water board until Feb. 8 for furnishing and placing a boiler at the pumping station. Five bids were received Jan. 27, but all were rejected. Supt. and Secy., E. L. Durban.

MANISTEE, MICH.—The question of buying the works of the Manistee Water Co. or of building a new plant is being discussed by the council. The present plant was built in 1882 at a cost of $193,000. E. W. Muenscher, Cy. Engr.

SCHOOLCRAFT, MICH.—Press reports state that this place voted, Jan. 25, by 134 for and 91 against issuing $16,000 in bonds for works and a light plant. The proposition failed to carry, lacking 22 votes of the two-thirds majority required. Henry I. Allen, Secy. Com., writes us that the question will be voted upon again; further data on works are wanted. Des. Engr., M. Walker, Fenton, Mich. G. M. Hudson, Mayor.

DUQUOIN, ILL.—Bids are asked until Feb. 11 for constructing a dam 400 ft. long and 14 ft. wide, a pump and boiler house, etc., and for furnishing two compound noncondensing pumping engines, two boilers, chimney, pipe, valves, etc.; bond, $5,000. Engr., Jas. H. Thompson, 726 The Rookery, Chicago; Mayor, D. W. Dunn.

SPRINGFIELD, ILL.—Local papers state that H. R. Worthington, New York, and the Holly Mfg. Co., Lockport, N. Y., submitted the only bids for furnishing a new 8,000,000-gallon pumping engine at $39,000 and $39,400 respectively. It is probable that the machinery will not be purchased this year. Supt., W. H. Southwick. Chn. Com., P. E. Hatch. Mayor Wheeler may be addressed.

VIOLA, ILL.—It is reported that the council has voted to issue bonds for sinking a test well for a water supply. D. A. Patterson, Village Clk.

CHARITON, IA.—We are informed that G. W. Alexander, Mayor, desires correspondence in regard to constructing works in this place. It was reported in 1896 that the Chariton Water-Works Co. was granted a franchise. Population (1890), 3,122.

INDIANOLA, IA.—It is reported that E. H. Hunter, of Des Moines, Ia., has been appointed receiver for the Indianola Water-Works Co.

MAQUOKETA, IA.—The council is considering plans for a new stand-pipe, according to reports. The old standpipe has a capacity of about 60,000 gallons. E. A. Huff, Cy. Clk.

OGDEN, IA.—The committee is reported as securing information for works.

HALLOCK, MINN.—J. H. Shaw, Wm. F. Kelso and P. H. Konzen are reported to have recently been appointed, at a mass meeting, as a committee to secure information in regard to works.

MORRIS, MINN.—It is reported that the question of works will be voted on at the spring election.

MISSOULA, MONT.—The Missoula Water Co. has been incorporated with a capital stock of $250,000 by Tyler Woodward, R. W. Baxter and Rufus Mallory. It is reported that it will buy the works of the Missoula Water-Works & Mining Co. The works will be improved.

CARTHAGE, MO.—The works of the Carthage Water-Works Co., it is reported, will soon be sold at a foreclosure sale for not less than $50,000. John T. Marshall, Special Comr.

SAXCOXIE, MO.—Press reports state that the Commercial Club has been organized to secure works, etc. Pres., Geo. H. Davis; Vice-Pres., W. J. Dawson; Treas., Julius Bowers; Secy., C. A. Dieter. Population, 1,300.

PARAGOULD, ARK.—Surveys, plans, etc., are being made for works by Sanders & Porter, Louisville, Ky., and Brookhaven, Miss.

MANZANOLA, COLO.—The question of building works is being considered, according to reports.

BAKER CITY, ORE.—L. Crabill, Chn. Com., writes us that the proposed new supply will be by gravity to the pumping station. The question has been postponed until later in the season by which time a full investigation of the question will be made. Estimated cost, $140,000. Supt., O. C. Stern.

PORTLAND, ORE.—Bids are asked until Mar. 15 for furnishing and laying 2,100 ft. of 24-in. steel submerged pipe, as stated in our advertising columns. D. D. Clarke, Asst. Engr.

MODESTO, CAL.—Bids are asked until Feb. 15 for furnishing and placing in position a new boiler at the waterworks and for removing the old one. W. A. Harter, Cy. Clk.

RANDSBURG, CAL.—John C. Quinn is reported as interested in the proposed gravity works for this place.

TEHACHOPI, CAL.—It is reported that information on works is wanted.

ANDOVER, N. B.—Our correspondent informs us that this village recently voted to spend $10,000 for works. Legislation is now being secured. Dr. Welling and J. S. Sutton may be addressed.

FREDERICTON, N. B.—This city is about to spend $5,000 in enlarging the pumping station, boiler house and for adding a new boiler. Supt., Alex. Burchill.

HINTONBURG, ONT.—**W. A. Mason, Village Clk.,** writes us that two different companies from Ottawa are offering to put in works for fire and domestic use. Both offers have been considered by the council and the plans, with specifications, have been submitted to a consulting engineer for advice.

RAT PORTAGE, ONT.—It is reported that work will be begun in the spring on the proposed plant voted for in November. Estimated cost, $75,000. Geo. Barnes may give information.

GUADALAJARA, MEX.—**C. H. M. Blake, Apartado Postal, No. 94** writes us under date of Jan. 24 that it was expected to close the contract at the end of that week for the construction of the proposed works and sewerage system, to cost about $3,000,000.

IRRIGATION.

PORT ARTHUR, TEX.—Reports state that a contract has been awarded by the Port Arthur Rice & Irrigation Co. to H. C. Ivans & Co., New Orleans, for putting in the pumping plant for the thousand-acre rice farm 12 miles above this place, on the Neches River, to have a capacity of from 12,000 to 15,000 gallons of water a minute.

NEW COMPANIES.—**Albuquerque Land & Water Co.,** Albuquerque, N. Mex.; $100,000; to construct reservoirs, canals, etc.; Angus A. Grant, Mariano S. Otero, Louis Ilfeld, Mathew Flournoy, Martin P. Stamm, William B. Childers, Owen W. Marron, Albuquerque.

Southern California Reservoir Co., San Bernardino, Cal.; $1,000,000; L. P. Hansen, Pasadena; C. E. Fish, L. A. B. O. Johnston, Redlands, S. Coles Tompkins, Lake View, Cal.

SEWERAGE.

QUINCY, MASS.—The commissioners have awarded the contract for furnishing and placing in position sewage pumping machinery to the Deane Steam Pump Co., Holyoke, Mass., at $11,320. The contract calls for two compound condensing pumps of 3,000,000 and 5,000,000-gallons capacity a day, auxiliary pumps and two 80-HP. boilers.

DEPEW, N. Y.—John Marsden, Utica, N. Y., has been awarded the contract for constructing the main sewers at $49,000. Cronin & O'Hern, Pittsburg, Pa., submitted the next lowest bid at $52,500.

SCHENECTADY, N. Y.—A bill has been introduced in the legislature to bond the city for $15,000 more than the outstanding bonds for sewer construction. J. B. Sebring, Cy. Engr.

SYRACUSE, N. Y.—The question of building sewers on the north side is being considered by the North Side Business Men's Association. Estimated cost, $120,000.

ERIE, PA.—Bids are asked until Feb. 3 for constructing a 15-in. pipe sewer in 23d St. Ben. E. Briggs, Cy. Engr.

TAMPA, FLA.—Bids are asked until Feb. 28 for constructing sewers, as stated in our advertising columns. W. B. Henderson, Pres. Bd. Pub. Wks.

COLUMBUS, MISS.—W. D. Humphries, Mayor, writes us that a bill is before the legislature authorizing the city to vote on the question of issuing $70,000 in bonds for water-works and a sewerage system. If the necessary two-thirds vote of the people is secured plans and specifications will be announced and bids asked for the work.

CLEVELAND, O.—Bids are asked until Feb. 24 for constructing an earth embankment and sewers on Warren Road, from Broadway to Grand Division Ave. Bond, $2,000. Geo. R. Warden, Dir. Pub. Wks.

COLUMBUS, O.—The city has engaged John W. Alvord, 1140 The Rookery, Chicago, as consulting engineer on the design of a system of storm water and sanitary drainage of that portion of the city lying west of the Scioto River, covering about five square miles. Also to design and report on a sewage disposal plant for the sewage of the entire city. Julian Griggs, Ch. Engr.; Felix Jacobs, Dir. Pub. Improvements.

EAST CLEVELAND, O.—The Walter P. Rice Engineering Co., 545 Society for Savings Bldg., Cleveland, O., has been instructed to prepare plans for a system. An election was held some time ago at which it was voted to issue $100,000 in bonds for sewerage purposes.

GLENVILLE, O.—Bids are asked until Feb. 15 for constructing sewers, drains flush tanks, etc., for section 1, of sewer district 2. Z. W. Morris, Village Clk.

TOLEDO, O.—Local papers state that City Engineer Brown has been instructed by the state board of health to prepare complete plans of the system of Toledo, and submit them to that board as soon as possible. He has also been instructed to prepare plans and specifications for the sewer districts in which it is proposed to build new sewers. Councilmen F. J. Shovar, D. H. James and A. D. Stewart are on the committee.

YOUNGSTOWN, O.—The council has voted to construct sewers in five streets. D. Heinselman, Pres. Council; F. P. Brown, Clk.

INDIANAPOLIS, IND.—Work on the proposed sewer in Noble St., from Washington to Louisiana Sts., will soon be begun, according to local papers.

TERRE HAUTE, IND.—The city engineer is preparing plans and specifications for extending the sewers. Last year 9,100 ft. of brick and 1,500 ft. of pipe sewer are reported to have been built last year.

FOND DU LAC, WIS.—**E. B. Parsons, Cy. Engr.,** writes us that the question of raising a special tax for constructing about 1½ miles of 36 and 30-in. pipe sewer, and a pumping station will be voted upon at the spring election.

ST. PAUL, MINN.—Bids are asked until Feb. 7 for reconstructing and lowering the sewers in Cedar St., between the Mississippi River and Seventh St. John Copeland, Pres. Bd. Pub. Wks.; W. F. Erwin, Clk.

PARSONS, KAN.—It is reported that specifications and plans for a sewer on the west side have been adopted. M. C. Gaffey, Cy. Engr.

PRESCOTT, ARIZ.—At a meeting held Jan. 20 to discuss the question of providing a system it was decided to ask Congress to authorize the issue of $150,000 in bonds to secure the improvement.

GUADALAJARA, MEX.—**Carlos H. M. Blake, Des. Engr.,** of this city, writes us under date of Jan. 24 that it was expected to close the contract that week for constructing a system and water-works; estimated cost, $3,000,000. Vitrified pipe for small sewers will be used. Mr. Blake's plans have been approved. The sewage will be disposed of by broad irrigation. In our issue of last week we stated that L. E. Miller, Cape May, N. J., proposes to build the system.

GARBAGE DISPOSAL—STREET CLEANING

LOWELL, MASS.—The board of health in its annual report has recommended the purchase of a second crematory.

SALEM, MASS.—The committee has voted to appropriate $4,510 for the purchase of six sprinkling carts, horses, harness, etc. Councilmen Osborn and Leach may be addressed.

ATLANTA, GA.—Chief Veal, of the sanitary department, is urging the council to construct new garbage disposal plant, etc. Mayor Collier may be addressed.

YOUNGSTOWN, O.—Local papers state that the following bids were received by the city commissioners Jan. 22 for furnishing and erecting a garbage disposal plant, as advertised in Engineering News. H. W. Calvin, Clk.:

James Cooper, 19 E. Wood St., Youngstown	$8,125
Engle Sanitary & Cremation Co., Des Moines, Ia.	11,250
U. K. Stringfellow, Findlay, O.	12,900
Pennsylvania Crematory Co., Marrietta, Pa.	12,000
Dixon Sanitary & Crematory Co., Findlay, O.	12,000

ZANESVILLE, O.—The street and alley committee has been directed to secure the cost of street sweeping machinery. Councilman W. S. Crane may be addressed.

STREETS AND ROADS.

BOSTON, MASS.—Bids are asked until Feb. 7 for furnishing 800,000 large and 300,000 Philadelphia size paving blocks. Surety, $15,000. Benj. W. Wells, Supt. Streets.——A contract was awarded Jan. 26 by the metropolitan park commission to H. P. Nawn, Boston, at $2,-795, for draining and grading for a speedway 1½ miles long and a roadway about one mile long. The bids are given under Contract Prices.

NORWICH, N. Y.—A plan is being considered by the trustees for about 7,000 lin. ft. of macadam paving; estimated cost, about $60,000. The business streets will be paved with brick. J. B. Turner, Pres. Board Trustees.

SCHENECTADY, N. Y.—A bill has been introduced in the legislature to allow the state to pay one-half the cost of paving Dock St., which lies almost entirely upon state land.——The paving of Albany St. with Catskill brick will be considered at the meeting of the council Feb. 8.

ATLANTIC CITY, N. J.—Bids are asked until March 2 for constructing gravel roads, as stated in our advertising columns. J. J. Albertson, Engr. in Charge, Magnolia, N. J.; Jos. H. Borton, Dir. Bd. Freeholders, Atlantic City.

NEWARK, N. J.—The council has appropriated $100,000 for street paving during the year.

READING, PA.—A proposition is being circulated for the construction of a boulevard 80 ft. wide, between Temple and this city, a distance of 3½ miles.

SAVANNAH, GA.—T. J. Davis, Chn. Com., informs us that the city is arranging to pave a number of residential streets with gravel.

ERIE, PA.—B. E. Briggs, Cy. Engr., writes us that the council has asked for bids for paving Steel St., from Second St. to 11th St., in order to estimate the cost. No appropriation or plans have been made and the work may not be done this year.

BALTIMORE, MD.—An ordinance is before the council for the appropriation of about $850,000 for street paving during the year.

CRAWFORDSVILLE, IND.—The question of paving 20,-000 sq. yds. with brick at an estimated cost of $25,000 is being considered. F. Hoffman, Cy. Engr.

SOUTH BEND, IND.—Bids are asked until Feb. 15 for the purchase of a steam road roller of from 10 to 12 tons. L. A. Hull, Cy. Clk.

GRAND RAPIDS, MICH.—Reports state that City Engineer Ames will soon submit the following estimates for street work: $2,917 for the grading and graveling of Queen St., from Quimby to Sweet Sts., and $2,157 for paving Lyon St., from Canal to Campau Sts.

WAUKESHA, WIS.—The Mayor vetoed the contract for paving Main St. with brick, let to Bretz & Son, of Springfield, Ill., on the ground that they were not the lowest bidders for the work. The board of public works has been ordered by the council to re-advertise the work. The bids were noted in our issue of Jan. 6 under Contract Prices. Wm. Powrie, Cy. Engr.

OAKLAND, CAL.—It is reported that the Oakland Paving Co. has been awarded a contract to macadamize 10th St., from Market to Filbert Sts., and 19th St., from Telegraph Ave. to Alice St.

SAN FRANCISCO, CAL.—A committee consisting of Mr. Devany, Chn., and Supervisors Rivers, Delany and Sheehan has reported favorably on the recommendations to pave portions of Sutter St., Grant Ave., Post St., Stockton St., Waller St. and Fell St., with bituminous rock.

REDWOOD CITY, CAL.—County Surveyor Gilbert has submitted his report for the proposed boulevard to cost about $310,000, to be of macadam and about 95 miles long. The question will be submitted at the election about Mar. 1. Messrs. Price, Ashe and Madison, Comrs. Highways.

MANUFACTURING PLANTS.

HOLYOKE, MASS.—It is reported that the Smith & White Mfg. Co. has purchased a mill site from the Riverside Paper Co. and that it will erect a 3-story brick building, 250 × 300 ft., in the spring. It will be of heavy mill construction throughout.

WATERTOWN, N. Y.—The Northern New York Beet Sugar Co., of Watertown, has been organized with a capital stock of $400,000. Reports state that a factory will soon be erected near the river at a cost of about $200,000. The directors for the first year will be: William P. Casey, of Syracuse, N. Y.; Frederick W. Britton, Watertown; William H. Egleston, Lowville, N. Y.; Charles Kilkenny, Utica, N. Y.; John J. Kennelly, Syracuse.

BUFFALO, N. Y.—Donald Bain, of this city, has been awarded the contract for building a 120-HP. ice machine for the Buffalo Co-operative Brewing Co., at $8,500.

BROOKLYN, N. Y.—The 3-story cardboard factory of S. Trier & Son, at 221 to 249 McKibbin St., was destroyed by fire Jan. 30, causing a total loss of about $100,000, of which $40,000 is said to be on machinery.

ALLENTOWN, PA.—A fire at Rosendale, near this town, Jan. 27, destroyed the Bonneville Cement Works, causing a reported loss of $100,000; fully insured.

CARLISLE, PA.—Reports state that Frank C. Bosler proposes to erect a beet sugar factory at this place, to cost about $500,000, provided the farmers guarantee to raise the required amount of beets.

CATASAUQUA, PA.—Plans have been prepared, and estimates are being received, according to reports, for a 2-story brick and iron addition to the brewery at this place, owned by Herman Kustenbauder. Arch., A. W. Leh, Post Office Bldg., South Bethlehem, Pa.

CHARLEROI, PA.—Press reports state that the Bamford Bros. Silk Mfg. Co., formerly of Paterson, N. J., will erect in the spring a 4-story brick building as an addition to the present plant in Charleroi, to cost $70,000. Estimated cost of machinery, $100,000.

PHILADELPHIA, PA.—The copper, brass and iron works and machine-constructing establishment of Geo. F. Ott, at 207 to 213 Buttonwood St., was destroyed by fire Jan. 29, causing an estimated loss of $140,000, of which $25,000 is on the buildings; fully insured.

ASHBORO, N. C.—Reports state that a spinning mill will soon be erected at this place with a running capacity of 2,500 spindles, with a 100-HP. power plant. Elijah Moffit is interested.

CINCINNATI, O.—Reports state that a large machine shop will be built in this city for R. K. Le Blond, and also that a 65-HP. engine and boiler has yet to be bought.

BAY CITY, MICH.—Press reports state that the United Alkali Co., of Liverpool, England, has purchased the large McGraw sawmill at Bay City, and that a plant for the manufacture of lower grade alkali will be built at a cost of about $1,000,000. The same company is now building a plant in Detroit, Mich.

SIOUX CITY, IA.—George Parks, Supt. of Construction, South Omaha, Neb., informs us that the Cudahy Packing Co., of South Omaha, is now building new beef houses in Sioux City, estimated to cost $450,000. R. J. Russell, Purchasing Agent, South Omaha.

BADEN, MO.—It is reported that the St. Louis Car Co. has purchased the plant of the Union Car Co., at Baden, and that it will remove its entire plant to this place and make improvements to cost about $100,000.

SAN FRANCISCO, CAL.—The plant of the Union Box Co., at Powell, Mason, Beach and North Sts., was burned, Jan. 20; estimated loss, $50,000.——The sash, door and blind factory of Miller & Hamilton and the plant of the California Brass & Iron Works were destroyed by fire, Jan. 19; total loss on buildings, $35,000. It is said that Miller & Hamilton will soon rebuild.

GAS PLANTS.

NEW BEDFORD, MASS.—It is reported that the New Bedford Gas & Edison Light Co. will increase its supply by installing a new holder having a capacity of 1,000,000 cu. ft. with three lifts.

ALTON, ILL.—Reports state that the Alton Railway & Illuminating Co. proposes to make extensive improvements to its plant on Belle St.

PAINESVILLE, O.—Bids are asked until Feb. 12 for the purchase of a gas franchise, according to reports. E. D. Hartwell, Cy. Clk.

GREAT FALLS, MONT.—Press reports state that Andrew Jensen and others have applied for a franchise to operate a gas plant in this place.

NEW COMPANIES.—Strattanville Gas Co, Strattanville, Pa.; $32,000, with $3,200 paid in; to produce and deal in natural gas; Lewis Streng, C. F. Stratton, R. Rulofson, Strattonville, Pa.

Baldwin Gas Light Co., San Francisco, Cal.; $100,000, with $80,000 paid in; Marcus Stone, Charles L. Asher, Frank Pauson, Joseph Napthaly, Samuel L. Napthaly, A. E. Brooke Ridley, Chas. L. Ackerman.

National Sunlight Gas Co., Aberdeen, S. Dak.; $9,000; Chas. A. Howard, Chas. M. Hopkins, Edwin G. Perry.

MISCELLANEOUS CONTRACTS.

BONDS.—Charleston, S. C.—Bids are asked until Feb. 19 for the purchase of $100,000 of 4% 30-year bonds. J. O Lea, Cy. Treas.

FIRE HOSE.—South Bethlehem, Pa.—Bids are asked until Feb. 7 for the purchase of 1,000 ft. of fire hose, according to reports. E. W. Stirk, Chn. Fire Com.

WHALE BOAT.—Biloxi, Miss.—Bids are asked until Feb. 8 for a whale boat. A. C. Smith, Assistant Surgeon, Marine Hospital Service, Quarantine Station, Biloxi.

CANAL BONDS.—Albany, N. Y.—Bids are asked until Feb. 18 for the purchase of $3,230,000 of 3% canal improvement bonds. James A. Roberts, Comptroller.

MONUMENT.—Buffalo, N. Y.—Reports state that the board of park commissioners has resolved to erect a monument in memory of Governor Clinton, at the western terminus of the Erie Canal.

DREDGING.—Keweenaw Point, Mich.—Bids are asked until Feb. 28 for dredging in the Portage Lake ship canals, as stated in our advertising columns. Maj. Clinton B. Sears, U. S. Engr., Duluth, Minn.

DREDGING.—Oakland Harbor, Cal.—Bids are asked until Mar. 10 for dredging in Oakland Harbor, as stated in our advertising columns. Maj. W. H. Heuer, U. S. Engr., 41 Flood Bldg., San Francisco, Cal.

FIRE BOAT.—Chicago, Ill.—Plans have been submitted and bids will soon be asked by the comptroller for the construction of a steel fire boat 118 ft. long, 25½ ft. beam and 21 ft. deep, to cost about $50,000.

DRY DOCK.—Newport News, Va.—The contract for constructing a dry dock at Newport News, to be 800 ft. long and estimated to cost about $1,000,000, will be let about Feb. 25, according to reports. C. P. Huntington, New York, may be addressed.

DRAINAGE.—Salamonia River, Ind.—Reports state that plans for a project is being considered by the court at Portland, Ind., for the draining of the Salamonia River, which will affect over 100,000 acres of farming land and which will extend a distance of 47 miles.

LOCKS AND DAMS.—Ohio River.—Eichel & Arnold, Evansville, Ind., who were awarded a contract Oct. 26 to construct locks and dams Nos. 2 and 4 in the Ohio River, the itemized bids of which were given in our issue of Nov. 25, will sub-let the contract, according to reports.

NAVAL SUPPLIES.—Mare Island, Cal.—Bids are asked by the navy department, Washington, D. C., until Mar. 1 for furnishing quantities of the following supplies for the navy yard at Mare Island: Copper burs, locks, iron buckets, lead pipe, brass and copper tubing, iron pipe, valves, etc. Edwin Stewart, Paymaster-Gen., Washington, D. C.

CANAL, BRIDGES, TELEPHONE SYSTEM, ETC.—Helena, Mont.—Bids are asked by the state arid land commission, Helena, Mont., until Feb. 20 for constructing a canal to irrigate district No. 1 and for developing water power; also the building of bridges, fences, telephone system, etc. Check, $10,000. Thos. C. Marshall, Chn., Helena.

COAL SHED AND TRESTLE.—Duluth, Minn.—We are informed that plans are being prepared by the engineering department for a coal shed for the pumping station and also a trestle for a side track from the Duluth & Iron Range R. R. to the pump house; estimated cost, about $5,-000. Bids will probably be asked in a few days. F. F. McGilvray, Cy. Engr.

JETTY.—Gray's Harbor, Wash.—The contract for the construction of a jetty at Gray's Harbor, Wash., has been let by the government to the Hale & Kern Contracting Co., of Portland, Ore., at $770,000. The jetty proper will extend seaward about 3½ miles from the high tide limit of Point Handen. It is believed that the completion of this jetty will give a permanent channel into Gray's Harbor of 24 ft. The itemized bids were given in our issue of Jan. 6. Capt. Harry Taylor, U. S. Engr., Seattle, Wash.

CONTRACT PRICES.

SPECIAL CASTINGS, ETC.—Philadelphia, Pa.—In our issue of last week we stated that the bids for furnishing small specials, large specials, breeches pipe and ¼ turns were in dollars a lb. instead of cents a lb.; viz.: Small specials, Reading Foundry Co., 1.75 cts. a lb.; Camden Iron Works, 1.85 cts.; McNeal Pipe & Foundry Co., 1.90 cts., and Donaldson Iron Co., 1.50 cts.; Large specials, 1.85 cts. a lb.; 2 cts.; 1.90 cts., respectively, the Donaldson company not bidding; Breeches pipe, Reading company, 3 cts. a lb.; McNeal Pipe & Foundry Co., 3.75 cts.; turns, 3.25 cts. a lb., and 3.75 cts., respectively; water pipe, and special castings, Grays Ferry Foundry Co., large castings, 2.25 cts.; breeches, 3.125 cts., and turns, 3 cts.

WATER PIPE, CASTINGS, LAYING ETC.—Monroeville, O.—We are informed that the following bids were received Jan. 26 for furnishing pipe, etc., in connection with the proposed works, as advertised in Engineering News, further bids being found under Water-Works; Engrs., Paul Voorhees, Guaranty Bldg., Buffalo, N. Y.; Pres. Comrs., Jos. Hiltz.:

Bidders.	Pipe.	Special castings.
Jas. B. Clow & Sons, Chicago, Ill.	$16.85	$0.02
Addyston Pipe & Steel Co., Cincinnati..	16.00	.02
Chattanooga (Tenn.) F'dry & Pipe Co...	16.23	.02
South Pittsburg (Tenn.) Pipe Works*..	16.20	.02½
Ohio Pipe Works, Columbus, O.	18.50	.02

Pipe laying:	8-in.	6-in.	4-in.
H. D. Shannon & Co., Orrville, O.*	$0.17	$0.14	$0.11
Chandley Bros. Co., Beaver Falls, Pa.	.18	.14	.12
Douglass Bros., Millerstown, Pa...	.19	.16½	.14
T. C. & H. M. Brooks, Jackson, Mich	.14½	.13	.11
Northern Engineering Co., Toledo, O.	.15	.12½	.10½

*Awarded contracts.

PARK WORK.—Boston, Mass.—We are informed that the following bids were received Jan. 24 by the Metropolitan Park Commission for work on the Speedway of the Charles River Reservation, Weston Ave. to North Harvard St.; Wm. T. Pierce, Ch. Engr.:

Bids Received by Metropolitan Park Commission, Boston, Mass., Jan. 26, for Speedway.

Quantities.	P. & F. E. McCarthy, Roxbury.	E. W. Everson & Co., Boston.	McCusker Bros., Waltham.	T. H. & C. M. Byrne, Hyde Park.	F. X. Saucier, Boston.	Warren-Scharf Co., Boston & New York.	Jos. D. Genaro, Boston.	T. W. Kinser Sons, Waltham.	Aab & Co., Waltham.	H. P. Nawn, Boston (accepted).
Earth excavation ...30,000 cu. yds.	$0.305	$0.45	$0.35	$0.27	$0.33	$0.23	$0.39	$0.30	$0.27	$0.27
Filling material ....80,000 " "	.625	.55	.54	.56	.55	.58	.475	.53	.59	.52
" " ....32,000 " "	.57	.60	.68	.63	.58	.58	.625	.59	.54	.59
Spruce piles ..... 2,500 lin. ft..	.24	.20	.20	.30	.25	.25	.30	.25	.17	.18
Timber ..... 370 M. ft...	26.00	20.00	20.00	25.00	24.00	24.00	25.00	25.00	19.00	22.50
8-in. drain ..... 7,400 lin. ft..	.435	.20	.20	.22	.24	.24	.22	.20	.22	.21
10-in. " ..... 2,500 " "	.485	.25	.30	.27	.30	.30	.30	.27	.27	.26
12-in. " ..... 1,500 " "	.535	.35	.35	.32	.35	.36	.36	.35	.31	.33
15-in. " ..... 2,200 " "	.645	.45	.50	.45	.50	.48	.50	.50	.41	.45
18-in. " ..... 2,600 " "	.7675	.65	.64	.58	.65	.60	.60	.65	.52	.63
24-in. " ..... 1,300 " "	1.155	1.15	1.05	1.05	1.00	1.04	1.25	1.25	.85	1.10
18-in. (iron) drain .. 36 " "	1.72	3.25	3.00	2.00	2.50	2.90	3.00	3.00	3.00	2.60
24-in. " " .. 36 " "	2.62	5.00	3.50	3.00	3.50	4.40	4.50	5.00	4.00	3.70
30-in. " " .. 132 " "	4.09	7.00	5.50	4.00	4.50	6.25	7.00	6.00	5.00	4.75
Brick masonry ..... 600 cu. yds.	13.23	12.00	13.00	13.00	12.50	13.00	13.00	12.00	12.50	13.00
Total	$106,394	$99,826	$99,004	$98,214	$97,416	$97,287	$95,897	$95,530	$94,574	$92,766

FOG BELL.—Trinidad Head, Cal.—Whyte & DeKome, San Francisco, Cal., are reported to have been awarded the contract for furnishing a 4,000-lb. fog bell for the Trinidad Head light station, Cal., at 17½ cts. a lb. W. T. Garrett, San Francisco, submitted the only other bid at 19¼ cts. a lb.

LEVEE WORK.—Alexandria, La.—Michael Tansey is reported to have been awarded the contract for constructing the 10-mile stretch of the levee on Bayou des Glaizes at 8¾ cts. a cu. yd. The levee contains about 220,000 cu. yds., and the contract requires that work must be commenced by Feb. 1, and be completed by Oct. 1, 1898, except that portion consisting of about 50,000 cu. yds. where crevasses have occurred, which must be completed by April 1, 1898. The highest bid was 15¾ cts. a cu. yd. Judge J. R. Thornton, Secy. Red River, Atchafayaya and Bayou Boeuf Levee Bd., Alexandria.

INDUSTRIAL NOTES.

THE ST. LOUIS CAR CO., St. Louis, Mo., is reported to have purchased the plant of the Union Car Co., Baden, Mo.

THE WESTINGHOUSE AIR-BRAKE CO., Wilmerding, Pa., is reported to be operating several departments of its plant day and night.

THE KING BRIDGE CO., Cleveland, O., has the contract to build five or six new bridges for the Central Vermont R. R. this season.

THE MICHIGAN-PENINSULAR CAR CO., Detroit, Mich., is reported to have the contract for 500 coal cars from the Pittsburg & Lake Erie R. R.

THE CARNEGIE STEEL CO., Ltd., Pittsburg, Pa., is reported to have an order for 30 miles of 20-lb. steel rails from the Imperial Government Railways of Japan.

THE RARIG ENGINEERING CO., Columbus, O., is reported to have a contract from the Columbus, Sandusky & Hocking R. R. to overhaul generally five locomotives.

CARRERE & HASTINGS, who were recently engaged as the architects for the new Academy of Design in New York, have removed their offices to 28 East 41st St., corner of Madison Ave., in that city.

THE BLOOMSBURG CAR CO., Bloomsburg, Pa., has a contract to build 100 gondola and 15 passenger cars for the Orange Free State Ry., South Africa. H. C. Dayton & Co. are the New York and export agents for this company.

DIETRICH & HARVEY, Baltimore, Md., are reported to have an order for a number of their planers for foreign shipment. They have recently shipped five planers to France, two to Budapest, one to Costa Rica and several to Mexico.

VOLLMER & REGISTER, agents for the Holmesburg Granite Co., the Atlas Cement Co. and the Union Akron Cement Co., in Philadelphia, have removed their office to 716 Harrison Bldg., 15th and Market Sts., in that city.

THE SPARR-STUBBS CONTRACTING CO., Lawrence, Kan., has been formed with $75,000 capital stock, to carry on a railway contracting business. The officers are: Mr. R. W. Sparr, Pres.; Mr. J. H. Glathart, Vice-Pres.; Mr. W. R. Stubbs, Treas., and Mr. T. S. McCoy, Engr. and Secy.

THE WEYMAN FOUNDRY & MACHINE CO., New Kensington, Pa., is reported to have doubled its capacity and is running double time to fill its orders. The company has the contract to build the machinery for the German Plate Glass Works to be erected in that place. Mr. M. B. Yengst has the contract to erect the building, which will cost $200,000. About 125 men will be employed.

THE WHITAKER STONE CO., Curwensville, Pa., has recently furnished stone used on the Lehigh Valley R. R. work at Jersey City, N. J., for which Mr. John Shields had the contract. The company is also furnishing the coping stone for the Reading Subway in Philadelphia, and last season shipped large quantities to Buffalo, N. Y., for use by Dwyer & Huntingdon and Mr. B. P. Smith. The Buffalo, Rochester & Pittsburg Ry. also use considerable of the product of the quarries of this company.

THE JOHN F. BYERS MACHINE CO., Ravenna, O., reports that within the last 30 days it has shipped one carload of hoisting engines and derricks to the National Contracting Co., Syracuse, N. Y.; one carload of hoisting engines and derricks to the Warren-Scharf Asphalt Paving Co., Utica, N. Y.; two geared locomotives to John Dunfee & Co., Syracuse, N. Y.; two carloads of hoisting engines and derricks to Beckwith & Quackenbush, Mohawk, N. Y.; one carload of machinery to Furnaceville Iron Co., Lockport, N. Y.; geared locomotives to Rodgers, Farrell & Hegeman, Pittsburg, Pa., S. Casparis, Kenneth, Ind., and Vandergrift & Jacobs, Duluth, Minn.; one carload of special machinery to New York, for the T. A. Gillespie Co., Pittsburg, Pa.; one special iron erection engine to the Hilton Bridge Construction Co., Albany, N. Y., and many smaller shipments. The plant was run to its full capacity for the whole of the year 1897, and the output was the largest of any year in the history of the company.

THE PHILADELPHIA COMMERCIAL MUSEUM, 233 South 4th St., Philadelphia, has published a list of merchants in Amsterdam, Holland, who are suspected of being frauds. This list, which has been compiled through the assistance of the Police Department of Amsterdam, is published for the protection of American manufacturers and others interested, and will be sent upon request to Mr. W. P. Wilson, Director of the Philadelphia Commercial Museum.

THE PELTON WATER WHEEL CO., San Francisco, Cal., reports a large amount of business for the last two months of 1897. Among the more important shipments may be mentioned the following: Wheels, governors and accessories covering a 2,000-HP. plant, San Rafael Paper Mills, Mexico; six wheels for various other localities in Mexico; a 1,200-HP. wheel, with governors and accessories for an electric transmission plant for Petropolis, Brazil, this being a duplicate of its former plant; an electric power transmission plant for Frujillo, Brazil; seven wheels with governors, pipe lines and accessories, to operate tea and coffee plantations in Java; three wheels for the Ruby Mines in India; two 500-HP. wheels for operating mills in Tasmania, Australia; three 1,000-HP. wheels, with governors and accessories, direct connected to Stanley generators, for the Yuba Power Co., Marysville, Cal.; one 200-HP. wheel for operating the mill of the Dexter Gold Mining Co., Tuscarora, Nev., and nine wheels for various mining operations in California. A large number of orders is in hand, making the outlook for the present year very encouraging.

THE GENERAL ELECTRIC CO., Schenectady, N. Y., has received orders from the British Thomson-Houston Co., Ltd., covering the complete locomotives for the Central London Underground Ry., as was briefly noted in our last issue. The original contract between the two latter companies included, with the special gearless motors and other electrical equipment, 32 locomotives for this important underground system, but, these, it was supposed, would have been built in England. The decision to confine the construction of the locomotive cabs and trucks, as well as the electrical equipment, to this company, is caused by the desire to have them built complete under the same supervision. The locomotives will each weigh about 45 tons, and will be equipped with a total of 800-HP. in motors. The trains to be hauled will be made up of five cars, giving a total load of 150 tons, 10 tons heavier than the ordinary Manhattan Elevated Ry. train. The schedule speed will be 15 miles an hour. The diameter of the tunnel being 11 ft. 6 ins. only, motor cars could not be used. The entire electrical equipment will, therefore, be placed on locomotives which will probably resemble in appearance those in use on the Manufacturer's R. R. in New Haven, Conn., and on the Hoboken Shore Road, Hoboken, N. J. The company is also building 36 additional 175-HP. motors for the Metropolitan West Side Electric Elevated R. R. of Chicago.

NEW COMPANIES.—Eclipse Machinery Co., Albany, N. Y.; to manufacture machinery for the collar and cuff trade; $1,000; Martin J. Locke, William H. Gledhill, C. P. Williams, Albany.

Dreadnought Automatic Air Brake Co., New York, N. Y.; $250,000, commencing with $125; to manufacture automatic air brakes, etc.; Geo. K. McLeod, G. A. Hamilton, M. M. Smith and W. B. Winslow, of New York; G. S. McLeod, Bayonne, N. J.

Trinidad Asphalt Co., New York; $1,000; Lewis A. Bebee, Dobb's Ferry; Victor E. Schanuburg, Brooklyn; William S. Teel, Jr., Yonkers.

New York Automatic Fire-escape Co., Charleston, W. Va.; $500,000, commencing with $510; to manufacture and sell fire-escapes; E. L. Squire, S. J. Proctor, J. S. Barker, Wm. C. Barker and Sam W. Nichols, Charleston.

Cortlandt Street Iron Works, Jersey City, N. J.; $5,000, with all paid in; to manufacture and sell elevating, conveying and separating machinery, etc.; Edward D. Hutchinson, Plainfield, N. J.; Wm. R. Armstrong and Sarah B. Armstrong, Jersey City, N. J.

Providence Construction Co., Jersey City, N. J.; $1,000,000, commencing with $400,000; to construct and repair railways, bridges, wells, sewers, canals, docks, etc.; Nelson G. Green and R. L. Maynard, New York, N. Y.; Thomas A. Berry and Lewis W. Moore, Philadelphia, Pa.; A. H. Vanderpool, Orange, N. J.

C. W. Incandescent Gas Light Co., Brooklyn, N. Y.; to manufacture incandescent burners and mantles; $25,000; Edward L. Wheeler, George H. Chinnock and Edward C. Murphy, Brooklyn.

Story Electric Co., Chicago, Ill.; $10,000; to furnish light, heat and power, and general manufacturing business; W. H. Utt, G. W. Oberlander, Eric Winters.

Rochester Electrical Mfg. Co., Rochester, N. Y.; $50,000; to manufacture electrical appliances, inventions, etc.; J. M. Kelly, Louis M. Miller, Wm. E. Werner, Rochester.

R. G. Marcy Mfg. Co., Bluffton, Ind.; $60,000; to manufacture pumps, water-works machinery, etc.; G. A. Ullman, Ashland, O., and R. G. Marcy, J. W. Sharick, J. A. Ullman, L. H. Marcy, Bluffton.

Florida Construction Co., Tallahassee, Fla.; $10,000; to build, equip and operate railways and navigation lines, etc.; T. F. McGarry, R. L. Burtsell, Don J. Leathers.

Jefferies Automatic Air Brake Co., Martinsburg, W. Va.; $5,000,000; G. S. Jefferies, Reading, Pa., and others.

Canyon Construction Co., Charleston, W. Va.; $100,000; for mining purposes; L. W. Good and others, Brooklyn, N. Y.

Niagara Falls Acetylene Machine Co., Albany, N. Y.; $40,000; to manufacture machines and apparatus for the generation of acetylene gas.

Shoshone Investment & Construction Co., Superior, Wis.; $6,000; Charles F. Catlin, Charles N. O'Hare, Samuel K. Duff, Jr.

Rochester Electrical Mfg. Co., Rochester, N. Y.; $50,000; J. Miller Kelly, Louis W. Miller, William E. Werner, Rochester.

H. Berthelet Sewer Pipe Co., Milwaukee, Wis.; $5,000; Henry Berthelet, Alfred H. Wells and James Morrison.

Niagara Falls Acetylene Machine Co., Niagara Falls, N. Y.; $40,000; R. F. Carter, George M. Tuttle, Charles R. Delmage and S. J. Lawrence, Niagara Falls; John Lapey and Emma L. Lapey, Buffalo; Alexander Fraser, Niagara Falls.

Allen & Morrison Brake Shoe Mfg. Co., Chicago; $50,000; Andrew J. Allen, James F. Morrison, Jonas H. Miller.

Richmond Borough Subway Co., Elizabeth, N. J.; J. B. Pearce, Jr., George Trantor, Horace E. Buel, Tonnes C. Larson, Archibald Fulton, Port Richmond, N. Y.; John Cronwell, New York; Louis Quien, Charles H. Moore, Elizabeth.

Novaculite Paving Co., East St. Louis, Mo.; $25,000; Robt. H. Rosborough, Sparta, Francis M. Gillett, Andrew C. Bryden, St. Louis.

Enterprise Foundry Co.; $25,000, of which $16,500 has been subscribed; H. Schrader, H. Martens, J. Heaney, A. Schrader, M. Martens.

Diesel Motor Co., New York city; $1,000,000; to manufacture motors, to be operated by oil, gas or other fuel; C. F. Willson, Percy Thorpe, John C. A. Sutor, R. Emmet Doherty, G. Franklin Bailey, New York city.

United Metal Mfg. Co., New York city; $25,000; to manufacture metal goods; Ralph S. Voorhees, Arlington, N. J.; Edward Neelan, Woodbridge, N. J.; Robert Swimmer, W. R. Elfers, New York city; W. F. Lund, Jersey City.

Vanport Brick Co., Pittsburg, Pa.; $5,000; Frank Moore, Edward P. Botsford, Alvin K. Riley, William F. Dunn, George Rollins, Pittsburg.

John Coar Construction Co., New York city; $15,000; to deal in real estate and do a brokerage, renting and collecting business; John Coar, Y. Edward Coar, Dexter B. Horton, New York city.

Booker Brick Co., Newport News, Va.; $4,000 to $10,000; to manufacture brick; R. M. Booker, R. M. Booker, Jr., C. F. Groome, Nelson S. Groome and G. Wray Booker, Hampton, Va.

Metropolitan Electric Construction Co., New York city; $50,000; Albert B. Chandler, Edward H. Johnson, William D. Macquesten, Edward C. Platt and Herbert T. Jennings.

Frankford Steel & Forging Co., Philadelphia, Pa.; $100,000, with $10,000 paid in; to manufacture steel and iron forgings, castings and machinery; Adam Findel, Treas., 123 N. 33d St., L. J. Morris, 720 N. Broad St., Philadelphia; Wm. J. Devine, Elmwood City, Pa.

Pennsylvania Car Wheel Co., Pittsburg, Pa.; $100,000, with $10,000 paid in; to manufacture car wheels of iron and steel; Chas. V. Slocum, Treas., 409 Times Bldg., Wm. L. Elkins, Pittsburg, Jos. W. Rhodes, Allegheny City, Pa.

Davis Hartman Co., Camden, N. J.; $40,000, with $1,000 paid in; to manufacture brass, iron and bronze castings, pipes, etc.; John M. Hartman, Mrs. Ruth A. Hartman, Mount Airy, Philadelphia; Wm. F. Davis, 1749 Park Ave., J. J. Davis, 1516 Ontario St., Philadelphia; Alex. Duer, Camden.

Lenox Mfg. Co., Allentown, Pa.; $35,000, commencing with $3,500; to manufacture iron and steel; Treas., C. W. Kech, Allentown; Directors, Edwin Thomas and Jacob Roberts, Catasauqa, Pa.

J. & J. B. Milholland Co., Pittsburg, Pa.; $5,000, commencing with $400; to manufacture iron and steel; Treas., H. C. Milholland, 5742 Centre Ave.; James Milholland and W. P. Porter, all of Pittsburg.

Ferro-Carbon Castings Co., Philadelphia, Pa.; $50,000, commencing with $5,000; to manufacture castings and conduct a general foundry and machinery business; Treas., John Haskin, 4100 Locust St.; Alfred C. Rex, Chestnut Hill; J. K. Caldwell, Germantown, all of Philadelphia.

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